59575

Class ____ . No. ____

Presented by

Parke Davis & Company

$1.70

Digitized by the Internet Archive
in 2013

http://archive.org/details/medicalage18detr

THE MEDICAL AGE

A SEMI-MONTHLY JOURNAL OF

MEDICINE AND SURGERY

FREDERICK W. MANN, M.D.
EDITOR

VOLUME XVIII

DETROIT, MICHIGAN
WILLIAM M. WARREN, PUBLISHER
1900

APR 13 1901

AUTHORS' INDEX.

ADAMS, A. L.: Catarrhal Deafness..... 206
ADAMS, J. HOWE: The Applicant for Life Insurance Should Receive More Protection in His Medical Examination..... 366
The Serum-Diagnosis of Typhoid Fever..... 53
ARONSTAM, N. E.: Impetigo Adenosa..... 401
Physiology of Sexualism..... 807
Treatment of Venereal Ulcers..... 287
BENEDICT, A. L.: Relation of Digestive Disturbances to Gynecology and Obstetrics..... 81
BOULDEN, H. B: The Tuberculin Test for Consumption: Its Wide-reaching Significance..... 124
BROCKMAN, D. C.: Acute Disease of the Suprarenal Capsule..... 527
BROWN, EDWARD J.: The Treatment of Squint..... 412
BULLITT, JAS. B.: Therapeutic Suggestion..... 404
CHEATHAM, WM.: Conservative Treatment of Acute Suppurative Inflammation of the Drum Cavity and Attic..... 612
Errors of Refraction and Blepharitis Marginalis.... 12
CROFFORD, T. J.: Peritonitis with Perforation of Small Intestine; Gunshot Wound of the Abdomen..... 214
DABNEY, S. G.: Throat Coughs..... 495
DEWEY, RICHARD: Addiction to Drugs, Especially in Reference to the Medical Profession..... 321
DUDLEY, E. C.: Diseases of Women 185
EGGERS, G. C.: Chronic Suppurative Otitis Media..... 121
FLANDERS, LOUIS W.: Foreign Bodies in the Eye; Inflammation of the Middle Ear..... 685
FUCHS, A. F.: Vital Statistics and Health Laws..... 16
GARDNER, JEROME T.: Therapeutic Use of Guaiamar—A Plea for its Further Use in Phthisis Pulmonalis..... 532
GRAHAM, ALOIS B.: Hyperchlorhydria..... 933
GRIFFITHS, GEO. W.: Carbuncle, with Report of a Case... 653
HACKETT, W. A.: Specific Urethritis..... 842
HALSTEAD, A. E.: Dislocation of the External Semilunar Fibrocartilage of the Right Knee; Removal of the Cartilage—A Case of Complete Rupture of Quadriceps Extensor Tendon Treated by Suture of the Tendon..... 325
HARRIS, H. F.: The Technique Governing the Use of Harris's Urine Separator..... 250
HENRY, F. R.: The Use of the Nauheim Bath in Cardiac Disease..... 211
HOLLOWAY, JAS. M.: Chronic Inflammation in Structures of the Elbow—Villous Degeneration of the Knee-joint.. 681
HUNTINGTON, W. C.: Tricuspid Regurgitation..... 281
INGLIS, DAVID: The Dual Action of the Brain, and its Relations to Dexterity and Double Consciousness..... 441
IRWIN, J. W.: Multiple Sclerosis..... 450
JACKSON, J. A.: Some Remarks Concerning Suitable Treatment Before, During, and After Surgical Operations..... 241
JOHNSON, FRANK S.: A Brief Summary of the Methods of Hospital Treatment of Typhoid Fever..... 61
LA FERTÉ, DANIEL: Some Deformities Corrected.....481, 521
LLOYD, SAMUEL: Cancer of the Breast..... 94
LOCKHART, F. A. L.: The Significance of Postclimacteric Hemorrhages..... 201
MACKELLAR, ORVILLE W.: The Union of the Two Diastatic Recti Abdominales in a Single Sheath for Visceral Ptosis..... 927
MANTON, W. P.: Posthom Shadows in Medical Science 361
The Angiotribe in Practice..... 50
MAPES, C. C.: Common Sense Versus So-called Christian Science..... 601
MARSHALL, EWING: Renal Calculus..... 690
MASON, CHAS.: Poliomyelitis Anterior Acuta..... 7
MATHEWS, JOSEPH M.: Ulceration of the Rectum with External Piles: Combined Internal and External Piles..... 641
MAYER, EMIL: Recurring Membranous Faucitis, Due to the Bacillus of Friedlander..... 530
MCLEAN, ANGUS: Analgesia of All the Tissues Below the Diaphragm by Injection of Cocaine Hydrochlorate into the Spinal Canal..... 802
A Rare and Interesting Bullet Wound..... 48
Fractures of the Vertex and Lateral Regions of the Skull..... 561
MONTGOMERY, D. W.: Iodism..... 765
MUNSON, S. E.: Our Milk Supply..... 810
MURFREE, J. B.: Gunshot Wounds of the Abdomen..... 89
MUSSER, JOHN H.: Medical Diagnosis..... 66
NILES, H. R.: Locomotor Ataxia..... 881
NORTHRUP, WM. P.: Typhoid Fever in an Infant..... 331
OPPENHEIMER, SEYMOUR: Tuberculosis of the Middle Ear.. 444
PARKER, W. T.: Transmission of Tuberculosis from Cow's Milk..... 132
PARKER, W. THORNTON: A Case of Double Inguinal Hernia with Prolapse of the Rectum..... 452
Arid Regions in the U. S. for Consumptives..... 571
PFINGST, A. O.: Use and Abuse of Atropia in Eye Diseases..... 891
PIERCE, LEWIS R.: The Treatment of Neurasthenia..... 921
POWERS, F W.: Simple Goitre..... 607
REYNOLDS, F. R.: Immediate and Remote Effects of Nasal Obstruction..... 41
ROBBINS, Fred. W.: Nephritis, with Special Regard to Prognosis..... 762
ROBINSON, BYRON: Death from Embolus in Forty-five Minutes..... 851
The Position and Phases of the Uterus..... 569
ROSENBERG, LOUIS J.: Professional Secrecy..... 894
RUDOLF, N. S.: A Visit to the Sabathu Leper Asylum..... 1
RUMMEL, CARL W.: Symptomatology and Treatment of Exophthalmic Goitre..... 853
SATTERWHITE, THOS. P.: Relation of Eye-strain to Epilepsy, Insanity, and Allied Conditions..... 290
SAWYER, JOHN P.: Gastric Disorders Producing Constipation and Diarrhea..... 649
SHERMAN, W. N.: The Pathology and Treatment of Anemia..... 846
SMITH, F. S.: Neurasthenia; with Report of Cases..... 729
TRENT, I. W.: Musical Murmurs of the Heart..... 928
TUTTON, H. V.: A Case of Enlarged and Misplaced Gallbladder Causing Symptoms Closely Simulating Appendicitis; Cholecystendysis; Recovery..... 175
WATHEN, WM. H.: Malignant Disease of the Uterus; Malaria..... 373
WEIDNER, CARL: Diabetes Insipidus, with Report of Case. 169
WILSON, NORTON L.: Acute Otitis Media..... 489
WYMAN, HAL C.: Reduction of Compound Fractures by Extension and External Manipulation..... 805
YOUNG, A. G.: Formaldehyde as a Milk Preservative..... 722

GENERAL INDEX TO VOLUME XVIII.

Abdomen, gunshot wounds of the....89, 214
precautions after operations on the.... 267
Abdominal contents, exploration of.... 234
operations, hernia following.... 157
Abortion, artificial—indications for in vomiting of pregnancy.... 679
a safe artificial method of.... 678
forced.... 557
Abscess, ear—dry treatment of.... 398
Abscesses, mastoid—diagnosis of.... 116
Acetanilid habit, a case of.... 636
Acetopyrin, a new antipyretic.... 913
Acne varioliformis, sea-salt in.... 751
Acromegaly, the pituitary gland as a factor in.... 589
Acute edema of the lungs.... 710
Adenitis in scarlet fever.... 550
Adenoid vegetations among schoolchildren.... 836
hemorrhage after removal of.... 753
indications for operative interference in.... 237
Adenomyomata of the uterus, histology and diagnosis of. 240
Adherent placenta.... 76
Albumin, a new reagent for.... 832
Albuminuria in diphtheria.... 33
Alcohol dressings.... 876
fomentations in the treatment of appendicular colic.... 674
peritonitis... 674
in disinfection of the hands.... 746
physiological effects of.... 190
use of.... 135
Alcobolic neuritis in child.... 80
Alcobolism, treatment of acute.... 952
A lively tilt.... 779
Amaurotic family idiocy.... 914
Amenorrhea.... 719
American Medical Association, the.... 456
Amputation and longevity.... 385
Analgesia of the ulnar nerve in epileptics.... 469
of tissues below diaphragm by injection of cocaine hydrocblorate.... 802
Anarchy and paranoia.... 659
Anemia, pathology and treatment of.... 846
pernicious.... 508
Anesthesia by cocaine.... 465
general.... 348
in the ears.... 439
local vs. general.... 345
of fingers and toes.... 388
Anesthetic properties of nirvanin.... 114
Aneurisms of the aorta, treatment of.... 832
Angina pectoris, pathology and tberapy of.... 749
Angiotribe in practice.... 50
use of the.... 357
Anteflexion, operative treatment of.... 198
Antipneumococcus serum, note on.... 32
Antiseptics in surgery.... 269
Antistreptococcic serum in facial erysipelas.... 673
Antitobacconists, a blow to.... 617
Antitoxin and diphtberitic paralysis.... 590
demand for.... 300
its more extended use for immunizing purposes in diphtheria.... 227
Antitoxins, researches on.... 432
Antitussin, treatment of whooping-cough witb.... 753
Antityphoid serum.... 536
Anus, formation of an artificial.... 348
Aorta, treatment of aneurisms of the.... 832
Apbasia with conservation of musical memory.... 520
A powerful convert.... 338
Apparent death of the new-born.... 758
Appendectomy, prophylactic.... 309
universal.... 22
Appendicitis.... 506
purulent—temperature during.... 870
simulating symptoms caused by injured gall-bladder.... 175
Appendicular colic, alcohol iu the treatment of.... 674
Appendix, early operation in cases of acute inflammation of the.... 866
Arab immunity.... 898
Arctic regions, bacteria in.... 433
Arsenic, cure of tumors by local use of.... 674
Arseuic for the cure of epithelical cancer.... 434
in malignant tumors.... 794
in scarlet fever.... 554
in the normal-organism.... 149, 196
paste, ortboform used iu.... 275
Arthritis, influence of diseases of the nose upou.... 676
Artificial impregnation.... 338
Asch operation, tbe.... 196
Asepsis of the surgeon's hands.... 788
Asphyxiated infants, treatment of.... 277
Aspirin in acute rheumatism.... 472
Asthma, cause and treatment of.... 829
treatment of.... 394
Athetosis.... 191
Atropia, use and abuse of in eye diseases.... 891
Atropine injections in ileitis.... 715
Attic cavity, acute suppurative inflammation of the.... 612
Auditory meatus, furunculosis of the.... 116

Babinski phenomenon, the.... 756
Bacillary metastasis in typhoid.... 72
Bacilli, acid resisting, in the lower animals.... 871
Bacillus of Friedlander, membranous faucitis due to the.. 530
the plague.... 578
typboid.... 349
Bacteria in the arctic regions.... 433
Baldness, treatment of.... 435
Balsamics in gonorrhea, indications for.... 34
Bile in the urine.... 273
Birth of living child nineteen minutes after death of the mother.... 879
Blackwater fever, Koch on.... 31
Bladder, treatment of tuberculosis of.... 73
Blepharitis marginalis and refraction, errors of.... 12
Blistering in the vomiting of pregnancy.... 160
Blood, a study of in cancer of the stomacb.... 434
examination of the.... 548
supply in mental pleasure and pain.... 69

Book Reviews:

Anders, Jas. M.: A Text-book of the Practice of Medicine.... 904
A Reference Handbook of the Medical Sciences. Edited by Albert H. Buck.... 864
Bacon, Gorbam: Manual of Otology.... 948
Baudry, S.: Injuries to the Eye.... 464
Beck, Carl: Fractures.... 626
Berkley, Hen. J.: A Treatise on Mental Diseases.... 825
Bohm, A. A.: A Text-book of Histology.... 904
Bradford, Edward H.: Orthopedic Surgery.... 144
Bruce, J. Mitchell: Bruce's Principles of Treatment.... 266
Bryant, Joseph D.: Operative Surgery.... 27
Cabot, Richard C.: Physical Diagnosis of Diseases of the Chest.... 825
Chapman, Charles W.: Heart Disease in Childhood.... 948
Collins, Joseph: The Treatment of Diseases of the Nervous System.... 225
Cooke, Joseph Brown: Obstetrical Technique.... 626
Crockett, Montgomery A.: Lea's Series of Pocket Textbooks.... 344
Da Costa, John Chalmers: Modern Surgery.... 864
Daniel, F. E.: Recollections of a Rebel Surgeon.... 144
De Laurence, L. W.: Hypnotism.... 627
Duane, Alexander: Duane's Medical Dictionary.... 665
Durck, Hermann: Saunders's Medical Hand Atlases.... 665
Einhorn, Max: Diseases of the Intestines.... 505
Ellis, Havelock: Studies in the Psychology of Sex.... 824
Garrigues, Henry J.: A Text-book of the Diseases of Women.... 948
Golebiewski, Ed.: Atlas and Epitome of Diseases Caused by Accidents.... 705
Gould, Geo. M.: A Pocket Dictionary.... 306
Students' Medical Dictionary.... 744
Hare, Hobart Amory: Hare's Text-book of Practical Therapeutics.... 542
Hartridge, Gustavus: Golden Rules of Opbthalmic Practice.... 626
Hay, Chas. W.: Diseases of the Eye.... 705
Heineck, Aime Paul: Manual of Anesthesia.... 306
Hyde, Jas. Nevins: Diseases of tbe Skin.... 344
Ingals, E. Fletcher: Diseases of the Chest, Throat, and Nasal Cavities.... 584

Book Reviews—*Continued.*
International Clinics. Edited by Hen. W. Cattell...463, 744
International Medical Annual, The... 425
International Text-book of Surgery. Edited by J. Collins Warren and A. Pearce Gould...185, 306
Jackson, Edward: Diagnosis and Treatment of the Diseases of the Eye... 66
Keyes, Edward L.: Venereal Diseases... 383
Levy, Ernst: Clinical Bacteriology... 464
Lewis, Denslow: Obstetric Clinic... 904
Lloyd, John Uri: Stringtown on the Pike... 864
Lydston, G. Frank: A Text-book of Venereal Diseases.. 66
Martin, Edward: Saunders's Question Compends... 463
Nichols, John B.: Histology and Pathology... 185
Ogden J. Bergen: The Urine and Urinary Diagnosis.... 744
Park, Wm. H.: Park's Bacteriology... 27
Penrose, Chas. B.: A Text-book of Diseases of Women. 425
Personal Hygiene. Edited by Walter L. Pyle... 665
Potts, Chas. S.: Lea's Series of Pocket Text-books... 266
Price-Brown, J.: Diseases of the Nose and Throat... 383
Progressive Medicine. Edited by Hobart Amory Hare. 144, 344
Purdy, Chas. W.: Practical Uranalysis and Urinary Diagnosis... 826
Purrington, Wm. A.: Christian Science... 144
Salinger, J. L.: Modern Medicine... 826
Schaeffer, Oskar: Atlas and Epitome of Gynecology... 705
Scudder, Chas. Locke: The Treatment of Fractures.... 505
Senn, N.: Tumors... 463
Shurly, Ernest L.: A Treatise on Diseases of the Nose and Throat... 784
Solis-Cohen, Solomon: Saunders's Question Compends. 425
Essentials of Medical Diagnosis... 505
Stengel, Alfred: A Text-book of Pathology... 904
Stevens, A. A.: A Manual of the Practice of Medicine... 306
Stimson, Lewis A.: Operative Surgery... 627
Stoney, Emily: Bacteriology and Surgical Technique for Nurses... 826
Taylor, A. N.: The Law in its Relation to Physicians... 784
Taylor, Robert W.: Sexual Disorders of the Male and Female... 584
The American Year-book of Medicine and Surgery. Edited by Geo. M. Gould... 225
The Essentials of Hematology. Published by the Palisade Manufacturing Co... 344
Thompson, Wm. Gilman: Practical Medicine... 626
Thorington, Jas.: Refraction and How to Refract.... 27
Tirard, Nestor: A Text-book of Medical Treatment..... 542
Transactions of the Royal Academy of Medicine in Ireland. Edited by John B. Story... 542
Twentieth Century Practice of Medicine. Edited by Thos. L. Stedman...383, 825
Valentine, Ferd C.: The Irrigation Treatment of Gonorrhea... 384
Watson, J. K.: A Handbook for Nurses... 463
Whitehead, Richard H.: Anatomy of the Brain... 425
Whitman, Royal: Orthopedic Surgery... 266
Williams, Dawson: Medical Diseases of Infancy and Childhood... 826
Year-book of the Nose, Throat, and Ear... 225

Borax as a preservative of food... 587
Botryomycosis in man... 68
Bowels, diphtheria of the... 633
Brain, dual action of the... 441
Breast, cancer of the... 94
Brewer's yeast, treatment of pneumonia with... 511
Bright's disease, eye affections in... 796
Bromide treatment of the opium habit... 474
Bromides in epilepsy... 553
Bronchus, epithelial tumors of the... 593
Bubonic plague, preventive inoculation against... 192
the... 311
Buccal mucous membranes, pigmented patches about.... 39
Bullet wound, an interesting... 48

Cacodylate of iron... 833
Cacodylates in tuberculosis... 114
Cæsarian section in dying woman; living child... 316
Calcareous infiltration of the skin... 272
Calcium carbide for inoperable cancer of the uterus..... 597
Calomel an antiseptic in confinements... 318
in diseases of the eye... 677
in treatment of suppurating scrofulous glands... 875
Camphorated oil, hypodermic injections of... 513
Cancer, abdominal hysterectomy for... 950
arsenic for the cure of... 434
a treatment of based on the parasite theory..... 386
cutaneous... 640
laryngeal—diagnosis and treatment of... 752
of the breast... 94
expectancy of life in... 745
of the stomach, study of the blood in... 434
of the uterus... 632
calcium carbide for inoperable..... 597
treatment of... 35
Carbolic acid poisoning, fatal case due to absorption by the skin... 312

Carbuncle... 653
Carcinoma and syphilis, researches on... 431
of the womb, a palliative operation for... 400
Cardiac disease, use of the Nauheim bath in... 211
Carrier pigeons, use of in medicine... 180
Cartilage, removal of the... 325
Castor oil, disguising the taste of... 395
Castration, evidences of prostatic atrophy after... 631
in the treatment of prostatic hypertrophy.... 467
Cataracts, recovery of mind and sight from removal of.. 915
Cataract, the treatment of immature... 954
Catarrhal deafness... 206
Catarrh, treatment of adhesive processes in middle ear by injections of pilocarpine... 117
Catgut, a new method of sterilizing... 389
some uses of... 499
Central nervous system, traumatisms of... 280
Cerebral complications caused by extension from the nose 360
localization... 757
Cerebrospinal fluid, nasal drainage of... 318
meningitis, etiology of... 511
new method of diagnosis in.... 857
Cervello's method of treatment of phthisis... 236
Cervical adenitis, etiology and treatment of... 468
endometritis... 797
regions, treatment of lymph nodes of the..... 828
sympathetic, removal of in glaucoma and optic nerve atrophy... 467
Character and physiognomy... 136
Childhood, heart disease in... 588
Children, treatment of squint in... 75
China, medical and surgical aid in... 617
Chinese impressiveness... 632
Chloretone as a hypnotic... 235
Chloride of iron in ulcer of the stomach... 794
Chloroanemia... 795
Chloroform anesthesia, danger-signals in... 147
narcosis, prophylaxis in... 507
Chlorosis due to a decrease in the hemoglobin... 33
feeding ovaries in... 116
Chlorotic patients, venous thrombosis in... 72
Cholelithiasis, medical treatment of... 868
Chorea and chorea gravidarum... 880
and menstruation... 469
minor, etiology of... 908
Christian science, bitter experience in... 219
common sense versus... 601
founder of... 500
Chronic endometritis, treatment of... 155
Chyluria, tænia nana a cause of... 226
Cirrhosis, progressive portal—bacteriology of... 354
of the liver... 430
Cocaine, anesthesia by... 465
hydrochlorate, analgesia of tissues below diaphragm by injection of... 802
pseudotetanus cured by... 28
subarachnoidean injections of as a substitute for anesthesia below diaphragm... 828
Cod-liver oil enemata in tuberculosis... 675
palatable mixtures of... 514
to administer... 740
Coffee and tea distillates—their action on the heart and respiration... 951
Cold and the plague bacillus... 578
Concretions in the urinary tract... 191
Confinements, calomel an antiseptic in... 318
Congenital lateral curvature of the spine... 145
Conjoined twins, separation of... 616
Connective tissue, distribution of in new growths... 711
Consanguineous marriages... 857
Consciousness, subliminal... 942
Constipation produc-d by gastric disorders... 649
Consumption, home treatment of... 152
tuberculin test for... 124
Consumptive poor, systematic treatment of... 391
Consumptives, arid regions for... 571
Contagion and infection, mental... 79
Coordinated movements restored after nerve section..... 230
Coryza, is it contagious?... 915
new treatment for... 237
Costal cartilages, inflammation of the as a sequela of typhoid fever... 430
Cough, cause of in children... 38
Coughs, throat... 495
Cretinism, thyroid extract in... 911
Crime and insanity, corelation of sexual functions with... 199
Croupous pneumonia complicated with hypopyon-keratitis... 32
Cutaneous cancer, etiology and pathology of... 640

Deadhead and deadbeat... 817
Deafness, catarrhal... 206
Death, post-coitum... 74
Deformities, some corrected...481, 521
Dermatitis vesico-bullosa et gangrenosa mutilans... 956
Dermatol in gonorrhea...473, 834
Dexterity, relation of the brain to... 441
Diabetes, bronzed... 21

Diabetes insipidus....169, 789
mellitus, cutaneous manifestations in.... 755
in children.... 911
pseudomucinous cystadenoma associated with.. 233
relation of surgery to.... 708
strict milk diet in.... 234
the coma of.... 709
Diabetic diet.... 898
Diaphoretic, an efficient.... 752
Diarrhea of children, use of opium in.... 636
produced by gastric disorders.... 649
summer—treatment of.... 429
treatment of.... 115
Diazo-reaction as an aid to prognosis in tuberculosis, the. 636
Dilatation of the stomach.... 153
diet in.... 351
Dionin as a substitute for morphine.... 435
in ophthalmological practice.... 200
Diphtheria, albuminuria in.... 33
more extended use of antitoxin for immunizing purposes in.... 227
of the stomach and bowels.... 633
quantity of antitoxin required in treatment of.... 874
toxin, action of on the spinal stichochrome cells.... 590
treatment of.... 553
Diphtheritic antitoxic serum, practice with.... 312
antitoxin and serum globulin.... 790
paralysis and autitoxin.... 590
Disease, physiological effects of alcohol in.... 190
Diseases of the Philippines.... 217
mental.... 319
Disinfection hy formaldehyde.... 353
Dislocation of the fibrocartilage of the knee.... 325
of the shoulder, surgical treatment for.... 506
Doctor, the lodge.... 479
Double consciousness, relation of the brain to.... 441
Drugs, addiction to.... 321
Drum cavity, acute suppurative inflammation of the.... 612
Dural infusion.... 178
Dysentery, saline treatment of.... 194
tropical—etiology of.... 831

Ear, middle—inflammation of the.... 685
production of local anesthesia in the....439, 717
tuberculosis of the.... 444
Ectopic pregnancy, pain as a pathognomonic symptom of.... 358
Eczema, parasitic origin of.... 754
Elbow, chronic inflammation in structures of following an injury.... 681
Elhow-joint, new method of resecting the.... 28
Electricity in pruritus.... 116
Electrolysis as a means of curing glandular urethritis.... 268
Emholus, death from.... 851
Empyema, treatment of.... 672
Endometritis, treatment of chronic.... 155
Enemata with skin rash.... 231
Enteric fever, treatment hy cold hathing.... 228
Enterocolitis in children.... 351
Enteroptosis, a new symptom of.... 550
Enncleation, vaginal.... 316
Enuresis in children.... 749
Epididymitis, gonorrheal—treatment of with salicylate.. 356
Epiglottis, diagnostic significance of an affection of in typhoid.... 156
Epilepsy, bromides in.... 553
due to ozena.... 836
hypochloruration in.... 228
of oral origin.... 398
psychical, a case of.... 77
relation of eye-strain to.... 290
of migraine to.... 40
treatment of.... 671
of in incipiency.... 472
Epileptics, analgesia of the ulnar nerve in.... 469
Epiphysis of the olecranon, separation of the.... 586
Epistaxis.... 837
Epithelial cancer, arsenic for the cure of.... 434
carcinomata, presence of parasitic amehæ in.. 551
tumors of the bronchus.... 593
Epithelioma developing upon lupus erythematosus.... 439
manus dorsalis.... 917
Ergotin in pneumonia.... 835
Erosions of the stomach.... 747
Erysipelas, an epidemic of.... 716
facial—antistreptococcic serum in.... 673
mercurial ointment in.... 74
Eserine collyria, intoxication from.... 238
Esophageal diverticula, diagnosis of.... 426
Esophagospasm in urinary iufection.... 868
Etiology and pathology of major epilepsy.... 279
Expert testimony.... 840
Extension and external manipulation, reduction of compound fractures hy.... 805
Extra-buccal feeding.... 674
Extract of suprarenal capsules in treatment of rachitis.. 793

Eye affections in Bright's disease.... 796
calomel in diseases of the.... 677
diseases, use and abuse of atropia in.... 891
foreign bodies in the.... 685
-strain, relation of to insanity, epilepsy, etc.... 290
symptoms of.... 556

Facial nerve, wounding of the.... 188
neuralgia, surgical treatment of.... 466
Faith, a test of.... 107
Fatigue, mental.... 320
Female, etiology of urethral prolapse in.... 159
generative organs, harm by office treatment of.. 158
Ferropyrine as a hemostatic.... 792
Fetal rickets, a case of.... 587
Fetid hreath.... 877
Fever, should it he treated?.... 870
some ocular disturbances in.... 200
Fihroids.... 316
uterine—operative treatment of.... 919
Fibroma cutis, relation of the neurofibroma to the.... 916
of postnasal space, operative treatment of.... 276
Fingers, local anesthesia of.... 388
Fistula in ano: its relation to phthisis.... 544
Flies, transmission of iufection by.... 430
Flnoroscope examinations, limitations and value of.... 112
Follicular tonsillitis, treatment of.... 359
Forced abortiou.... 557
Forceps delivery, post-mortem.... 358
in mortua, with liviug child.... 317
iu the aftercoming head.... 399
Formaldehyde as a milk preservative.... 722
as a preservative of food.... 587
disinfection hy.... 353
in milk.... 738
in uterine hemorrhage.... 760
its use in preserving milk.... 700
Formalin, treatment of warts with.... 436
Fractures, compound—reduction of.... 805
of the vertex and lateral regions of the skull.. 561
prophylactic measures to he observed after... 746
treatment of since introduction of the Roentgen rays.... 706
Friedlander, recurring membranous faucitis due to the bacillus of.... 530
Frontal sinus empyema, cases of.... 594
Frothingham, Geo. E., the late.... 337
Furunculosis of the external auditory meatus.... 116
treatment of.... 195

Gall-bladder, large and misplaced.... 175
rupture of the.... 387
Gall-stone, sulphur waters in.... 914
Gall-stones, some phases of.... 347
Gangrene complicated by glycosuria.... 113
gaseous.... 550
Gangrenosa mutilans, dermatitis vesico-bullosa et.... 956
Gastric ulcer, the treatment of.... 750
Gastroptosis.... 906
Gelatin as a hemostatic.... 154
injections as a hemostatic.... 668
solutions in hemorrhages.... 112
treatment of hematuria with.... 554
Gelsemium, action of upon the nuclei of the motor cerehral nerves.... 680
Generalized melanosarcoma.... 307
Genito-urinary diseases—can the State suppress?.... 229
Giautism, the pituitary gland as a factor in.... 589
Glancoma, removal of the cervical sympathetic in.... 467
Glycosuria with gangrene.... 113
Goitre, etiology and symptomatology of.... 392
exophthalmic—symptomatology and treatment of 853
simple.... 607
Gonococcus peritonitis, acute.... 70
Gonorrhea, antityphoid vacciue iu.... 395
chronic.... 110
deaths from.... 585
dermatol in.... 473, 834
indications for balsamics in.... 34
of women, ichthyol in.... 437
treated hy mercurol irrigations.... 437
treatment of.... 512
of by methylene hlue.... 269
Gonorrheal epididymitis, salicylate of methyl in.... 74
treatment of.... 356
Gout.... 68
pathogeny of.... 667
Great brains.... 820
Guaiamar, therapeutic use of.... 532
Gunshot wounds in the Spanish-American war.... 345
of the ahdomen.... 89
Gynecology, preventive.... 598
relation of digestive disturbances to.... 81

Harris's urine separator.... 250
Hay-fever, new treatment for.... 237
treatment of.... 877
Health laws and statistics.... 16

Health, physiological effects of alcohol in..... 190
Hearing and sight, the cortical localization of..... 960
Heart disease in childhood..... 588
Schott method in..... 226
suprarenal gland in..... 820
therapeutics of..... 274
intensity of the second sounds of the..... 151
musical murmurs of the..... 928
the action of distillate of tea and coffee on the..... 951
wounds of the..... 147
Heat stroke, venesection in..... 672
Hedonal..... 555
Hematology, prognosis based on..... 897
Hematuria, treatment of with gelatin..... 554
Hemoglobin, chlorosis due to a decrease in..... 33
Hemorrhage after removal of adenoid vegetations..... 753
from gastric ulcers, surgical treatment of... 30
prostatic..... 545
puerperal—normal saliue transfusion in..... 920
retinal—a case of..... 238
Hemorrhages, gelatin solutions in..... 112
significance of postclimacteric..... 201
Hemorrhoids, naftalan in..... 873
Hemostatic, gelatin as a..... 154
Hereditary optic atrophy..... 638
Hernia, a case of double inguinal..... 452
following abdominal operations..... 157
strangulated—reduction of..... 905
umbilical..... 160
Herniæ in pregnancy..... 160
Heroin in surgical practice..... 389
toxicity of..... 435
Herpes zoster, therapy of..... 314
Hiccough, treatment of..... 273
Hot-air douches in rhinological practices..... 795
Humerus, fracture of the neck of the..... 585
Hydrocele, cure of by eversion of the tunica vaginalis.... 67
Hydrocephalus, acute..... 71
Hydrogen peroxide for the treatment of septic wounds... 474
Hyperchlorhydria..... 933
Hypertrophic alcoholic cirrhosis of the liver, cure of..... 795
Hypnotic, chloretone as a..... 253
Hypochloruration in epilepsy..... 228
Hypodermic injections of camphorated oil..... 513
Hypopyon-keratitis..... 32
Hysterectomy..... 186
vaginal.....316, 353
Hysterical polyuria..... 599

Ichthalbin as a subsitute for ichthyol..... 155
Ichthyol in gonorrhea of women..... 437
its absorbability by the skin..... 356
Igazol..... 555
Ileitis, atropine iujections in..... 715
Iliac colostomy made by the double ligature..... 949
Immunity from malarial infection..... 510
Impetigo adenosa..... 401
treatment of..... 514
Impregnation, artificial..... 338
Inebriate criminals..... 549
Inebriety, treatment of..... 310
Infant mortality, cause aud preveution of..... 315
Infants, feeding of..... 555
Iufection..... 631
and contagion, mental..... 79
by flies, transmission of..... 430
method of preventing during surgical operations..... 628
Infectious diseases, the thyroid in..... 554
Influence of food upon milk secretiou..... 830
of light ou morbid processes..... 873
Infusion, dural..... 178
Inherited syphilis..... 427
Insane, surgery amoug the..... 586
Insanity and pelvic disease..... 739
corelations of sexual functions with..... 199
puerperal..... 76
relation of eye-strain to..... 290
simulation of..... 837
Insurance, medical examination of applicant for..... 366
Intestinal antisepsis in children..... 908
Intestine, resection of.....188, 308
Intoxication from eseriue collyria..... 238
Intracranial pressure..... 546
Intraperitoneal infusion of saline solution..... 423
Intra-uterine immunization to syphilis..... 416
Invention, feminine faculty of..... 60
Iodine, combinations of..... 36
treatment of syphilis with..... 119
Iodism..... 765
Iodoform in treatment of suppurating scrofulous glands. 875
poisoning, fatal case of..... 953
Iron hematopoietic influence..... 156
"Irritable bladder" in children..... 749

Jaundice, maliguant, saline solution in..... 236

Kidneys, effects of some anesthetics on the..... 712
Knee-joint, villous degeneration of the..... 681
Koch's bacilli, tuberculosis without..... 217
Koplik's spots in measles..... 509

Laborde's method of resuscitating asphyxiated infants, modification of..... 277
Labor, subdural injections in..... 719
Lacrimal canal, cause of chrouic occlusion of the..... 638
Lacteal secretion, abnormal..... 22
Landry's paralysis..... 600
Laparotomy..... 546
Laryngeal cancer, diagnosis and treatment of..... 752
Larynx, a leech in the..... 396
tuberculosis of the..... 519
Leper asylum, Sahathu, a visit to the..... 1
settlement at Molokai, disinfection of mails from.. 947
Leprosy, recovery from..... 910
researches on..... 150
Liquid air is not germicidal..... 301
Liver, cirrhosis of the..... 430
cure of a case of hypertrophic alcoholic cirrhosis of the..... 795
lesions of in young children..... 195
rupture of the..... 387
sodium salicylate in the treatment of some diseases of..... 35
Locomotor ataxia..... 881
importance of early diagnosis in..... 279
Longevity..... 385
Lumbar cord cocainization..... 893
Lungs, acute edema of the..... 710
Lupus and skin diseases, treatment of with x-rays..... 396
erythematosus, multiple epithelioma developing upon..... 439
secondary to tuberculosis of the skin..... 595
some clinical observations in..... 559
treatment of by x-rays..... 145
vulgaris affecting the site of vaccination..... 239
Lymph nodes of the cervical region, acute and chronic... 828

Madness of Hamlet and Macbeth, the..... 260
Major epilepsy, etiology and pathology of..... 279
Malaria..... 373
a cure for..... 820
methylene blue in..... 194
prophylaxis of..... 189
protecting Italian laborers from..... 660
with disseminated sclerosis..... 959
Malarial fever, etiology of..... 392
infection, immunity from..... 510
Malignant tumors..... 308
Mammary gland, elimination of mercury by the..... 431
Mastitis..... 198
Mastoid, anterior abcesses of..... 116
surgery of the..... 397
Masturbation and amenorrhea..... 719
Measles, Koplik's spots in..... 509
Medical college endowment..... 659
department, a well conducted..... 219
examinatiou of applicant for insurance..... 366
school of the future, the..... 390
theses in the 17th ceutury..... 510
Medicine, use of carrier pigeons in..... 180
Medullary narcosis..... 819
Melanosarcoma, generalized..... 307
Membranous faucitis due to the bacillus of Friedlander.. 530
Meningitic herpes..... 476
Meningitis, cerebrospinal—new method of diagnosis in.... 857
tuberculous—cellular diagnosis of..... 909
Menstruation in chorea..... 469
what is normal?..... 958
Mental diseases, change of scene in..... 679
pathology of..... 319
fatigue..... 320
Mercurial ointment in erysipelas..... 74
Mercurol: a new remedy in urethritis..... 827
irrigations, a case of gonorrhea treated by 437
Mercury administered in syphilis..... 875
elimination of by the mammary gland..... 431
its use in the treatment of syphilis..... 119
Metastasis, a case of..... 717
Methyl salicylate in treatment of rheumatism..... 913
Methylene blue as an analgesic..... 874
in malaria..... 194
in treatment of gynecologic affections... 912
prophylaxis aud treatment of gonorrhea by..... 269
Metrorrhagia, treatment of..... 478
Michigan medical law..... 297
supreme court, decree of..... 338
Milk diet in diabetes..... 234
transmission of tuberculosis from..... 132
Modern medical teaching..... 740
Molar implanted in the orbital wall of the maxillary sinus 397
Morbus Basedowii, etiology of..... 549
Morphine assuetude, causes of..... 669
dionin as a substitute for..... 435

Mortua, forceps in..... 317
Motor cerebral nerves, action of gelsemium upon the nuclei of the..... 680
Multiple sclerosis..... 450
Muscle plasma, treatment of tuberculosis infection by ... 311
Musical memory, aphasia with conservation of..... 520

Naftalan in hemorrhoids..... 873
Nail, white spots and streaks in the..... 878
Naphthalin for pinworms..... 236
Nasal accessory cavity affections, diagnosis of..... 196
discharges, treatmeut of..... 516
drainage of cerebrospinal fluid..... 318
obstruction, immediate and remote effects of..... 41
synechia..... 953
Nasopharyngeal disease in pediatric practice..... 676
Nasopharynx, tuberculoma of the..... 715
Nauheim bath, use of in cardiac disease..... 211
Necrotic bronchopneumonia with streptothrix..... 869
Nephritis, with special regard to prognosis..... 762
Nephrolithiasis..... 690
Nerve, facial—wounding of the..... 188
section, restoration of coordinated movements after..... 230
Nervous diseases, change of scene in..... 679
trauma as a cause of..... 918
Neuralgia, facial—surgical treatment of..... 466
Neurasthenia, the treatment of..... 921
treatmeut of by spermin..... 591
with report of cases..... 729
Neuritis, alcoholic, in child..... 80
Neurofibroma, its relation to the fibroma cutis..... 916
Neuron, our knowledge of..... 800
Neuropathic hemorrhages..... 832
Nevus cancer, a case of..... 717
New-born, apparent death of the..... 758
Nipples, fissured..... 198
Nirvanin, anesthetic properties of..... 114
Nose, a peculiar disease involving the..... 117
cerebral complications caused by extension from the..... 360
disease of as a cause of chronic occlusion of the lacrimal canal..... 638
influence of diseases of upon osteitis and arthritis.. 676
Nursiug women, diet of..... 77

Obesity, drugs in treatment of..... 314
treatment of..... 509
Objects of worship as chosen weapons for murder in religious mania..... 839
Odors, nature of the physics of..... 637
Oily collyria..... 439
Olecranon, separation of the epiphysis of the 586
Olive oil in stenosis of the pylorus and duodenum..... 865
Ophthalmological practice, dionin in..... 200
Opium habit, bromide treatmeut of the..... 474
use of in summer diarrheas of children..... 636
Optic atrophy, hereditary..... 638
nerve atrophy, removal of the cervical sympathetic in..... 467
Organism, arseuic in..... 196
existence of arsenic in 149
Organotherapy in gynecological therapeutics 797
Organs, female generative—harm by office treatment of.. 158
Orthoform makes arsenic paste painless..... 275
Osteitis, influence of diseases of the nose upon..... 676
Osteopathy, a decision on..... 137
Otitis media, acute..... 489
chronic suppurative..... 121
treatment of..... 276
Our milk supply 810
Ovarian transplantation..... 148
Ovaries, feeding in chlorosis..... 116
Oxaluria, a study of..... 791
Oxytocic, sugar as an..... 760
Ozena, epilepsy due to..... 836

Pancreas, the islands of Langerhans of the..... 712
Papillomata of penis..... 436
Paralysis, Landry's..... 600
spinal, of infant..... 79
Paranoia and anarchy..... 659
Parasite theory, a treatment of cancer based on the..... 386
Parasitic amebæ, its presence in epithelial carcinomata... 551
Paroxysmal sneezing..... 39
Pathogensis of uterine rupture..... 197
Pathology, progress in..... 270
Pelvic disease and insanity..... 739
Penis, papillomata of the..... 436
Pericardium, wouuds of the..... 147
Peritoneal infection, typhoid fever with symptoms of.... 546
Peritonitis, alcohol fomentations in the treatment of..... 674
with perforation of small intestine..... 214
Perityphlitis, snrgical treatment of 949
Philippines, diseases of the..... 217
the contract surgeon in..... 700
Phthisis, Cervello's treatment of 236
painting with formalin in..... 356
Phthisis pulmonalis, use of guaiamar in..... 532
relation of fistula in ano to..... 544
Physiognomy and character 136
Physostigmine versus curare..... 953
Pigmented patches about the buccal mucons membrane.. 39
Piles, ulceration of the rectum with external. 641
Pilocarpine, treatment of catarrhal adhesive processes in the ear by injection of..... 117
Pinworms, naphthalin for..... 236
Pituitary gland as a factor in acromegaly and giantism.. 589
Placenta, adherent..... 76
Placental transmission..... 519
Plague bacillus and the cold..... 578
bubonic 311
result of the labors of the German commissioners at Bombay..... 150
Plantar reflex, the..... 756
Pleurisy, do not tap 337
Pneumouia, ergotin in..... 835
pathology and treatment of..... 711
prognosis of..... 907
treatment based upon its pathology..... 37
with brewer's yeast 511
Pneumonic tuberculosis..... 391
Pneumothorax 350
Pneumotomy, a case of..... 346
Poisoniug, its bearing on immunity..... 336
Poliomyelitis auterior acuta..... 7
Polyuria, hysterical..... 599
Postclimacteric hemorrhages, significance of..... 201
Posterior urethritis, urotropiu in 714
Posthom shadows in medical science..... 361
Post-mortem forceps delivery..... 358
Postnasal space, treatment of fibroma of 276
Potash solution, denudation with for vaccination..... 187
Pott's disease, diagnosis of..... 786
Preanesthesia sedative..... 219
Preguancy, and fibroids..... 278
blisteriug in the vomiting of..... 140
early diagnosis of..... 160
ectopic..... 358
in herniæ..... 160
Primiparæ, transverse positions and turning in..... 920
Professional cheerfulness..... 252
experience..... 735
secrecy 894
tact 656
Prognosis based on hematology..... 897
Projectile, surgical aspects of the modern small-bore..... 427
Prolapsus ani in children, treatment of by ice tampons... 867
Prophylaxis in chloroform narcosis..... 507
of malaria 189
Prostatic atrophy after castration, evidences of..... 631
hemorrhage 545
hypertrophy, castration in the treatmeut of.... 467
vasectomy in the treatment of.... 467
Pruritus, electricity in..... 116
Pseudomucinous cystadenoma associated with diabetes... 233
Pseudotetanus cured by cocaiue aud dry fomentations.... 28
Psoriasis cured by thyroidin..... 715
Psychiatry, teaching of 78
Psychical epilepsy, a case of..... 77
Psychology, nature and principles of..... 120
Puerperal eclampsia..... 598
hemorrhage, normal saline transfusion in..... 920
inguinal parametritis..... 478
insauity..... 76
sepsis, surgical treatment of 186
Pulmonary phthisis, treatment of..... 74
Puruleut appendicitis, temperature during 870
Pus, its detectiou in the urine 871
Pylorns, stricture of..... 111
Pyrogallol..... 355

Quadriceps extensor tendon, rupture of..... 325

Rachitis, extract of suprarenal capsules in treatment of. 793
Raised from the dead..... 630
Rationalist, the..... 615
Rats..... 260
destruction of 418
Rectal hemorrhoids, submucous ligature for..... 629
irrigations in typhoid fever 748
prolapse, snrgical treatment of..... 905
Rectum, prolapse of the..... 452
ulceration of with external piles..... 641
Reformer, a radical..... 218
Refraction, errors of 12
Regurgitation, tricnspid 281
Renal calculi and Roentgen rays..... 272
calculus..... 690
Research, endowment of 61
Resecting, new method of..... 28
Resection of spermatic cords..... 467
Resections of the intestines 308
Respiration, the action of distillate of tea aud coffee on the..... 951
Retinal hemorrhage, a case of..... 238

Retroperitoneal sarcoma ... 230
Rheumatism, acute articular ... 390
aspirin in ... 472
injections of iodide of sodium in ... 876
methyl salicylate in treatmeut of ... 913
treatment of ... 313
Rhythmical tractions upon the tongue ... 270
Ringworm of the scalp ... 751
Unna's ointment in ... 918
Roentgen rays and renal calculi ... 272
treatment of fractures since the iutroduction of ... 706
Routinist, the ... 615
Rupture of liver and gall-bladder ... 387
of the esophagus caused by vomiting ... 518
of the parturient womb, treatment of ... 440
of the uterus ... 477

Salicylate of methyl in gonorrheal epididymitis ... 74
Salicylates, treatment of gonorrheal epididymitis with ... 356
Saline solution in malignant jaundice ... 236
intraperitoneal infusion of ... 428
normal ... 315
treatment of dysentery ... 194
Salol concretions in the stools ... 552
in tapeworm ... 475
Salts, uric acid—our knowledge of ... 548
Sanitation, mental ... 941
Saprophytes, paraform collodion in the treatment of cutaneous ... 952
Scalp, ringworm of the ... 751
Scarlatina miliaria ... 429
Scarlatinal sore throat, sozoiodolate of sodium in ... 750
Scarlet fever, adenitis in ... 550
arsenic in ... 554
Schott method in heart disease ... 226
Scurvy, an experimental inquiry into ... 393
Seasickness, prevention of ... 455
Seborrhea and its results ... 798
Self-mutilation in the army ... 260
Septum, deviation of ... 118
Serum, antipneumococcus ... 32
antityphoid ... 536
artificial, and typhoid fever ... 713
globulin and diphtheritic antitoxiu ... 790
Sexual functions, corelation of with insanity aud criue ... 199
organs, female—functional disorders of the ... 759
Sexualism, physiology of ... 807
Shell-membrane from egg for transplantation ... 270
Shock, prevention during surgical operations ... 628
Shoulder, chronic dislocation of ... 506
Should fever be treated ? ... 870
Sidonal ... 314
Sight and hearing, the cortical localization of ... 960
Sigmoid flexure, inflammatory stricture of ... 349
Silver nitrate injection in pulmonary phthisis ... 74
Singers' nodes ... 835
Sinus empyema ... 594
Skin, calcareous infiltration of ... 272
diseases, treatment of with x-rays ... 396
excretion of urea by the ... 352
flaps, sensation in transplanted ... 67
grafting ... 670
malignant diseases of the ... 639
rash following enemata ... 231
Skull, fracture of the ... 561
Smallpox of mild type ... 898
Snake toxins, hemoxlytic action of ... 354
Sneezing, paroxysmal ... 39
Societies, local medical ... 106
Sodium cacodylate, elimination of ... 514
salicylate in the treatment of the liver ... 35
sulphate as a laxative ... 834
Soft chancre, nitrate of lead in ... 751
Solution, saline ... 315
Solutions, aqueous salt ... 193
Soup diet in typhoid fever ... 748
Sozoiodolate of sodium in scarlatinal sore throat ... 750
Spasmus nutans, treatment of ... 192
Specialist, the rich ... 376
Specific urethritis ... 842
Spermatic cords, total resection of the ... 467
Spermin, treatment of neurasthenia by ... 591
Spina bifida, treatment of ... 906
Spinal canal, analgesia of tissues below diaphragm by injection of cocaine hydrochlorate in the ... 802
diseases of later life ... 79
fracture paraplegia ... 228
paralysis of infant ... 79
stichochrome cells, action of diphtheria toxin on the ... 590
Spine, curvature of the ... 145
Spleen, rupture of in typhoid fever ... 551
Squint, treatment of ... 412
of in children ... 75
Statistics and health laws, vital ... 16
Stenosis of the pylorus and duodenum, olive oil in ... 865
Sterilizing catgut ... 389
Stomach, chronic ulcer of ... 307
diet in dilatation of the ... 351
dilatation of the ... 153
diphtheria of the ... 633
erosions of the ... 747
in early tuberculosis ... 508
malignant disease of the ... 393
study of the blood in cancer of the ... 434
Stools, salol concretions in the ... 552
Strangulated hernia, reduction of ... 905
Streptothrix, necrotic bronchopneumonia with ... 869
Stricture of pylorus ... 111
Strictures of the sigmoid flexure ... 349
Subarachnoid space, notes on ... 546
Subdural injections in labor ... 719
Submucous ligature for rectal hemorrhoids ... 629
Sugar as an oxytocic ... 760
Suggestion, use of ... 579
Sulphur waters in gall-stone ... 914
Suppurating scrofulous glands, combination of iodoform and calomel in treatment of ... 875
Suprarenal capsule, acute disease of the ... 527
gland extract as a hemostatic ... 871
uses of ... 258
in heart disease ... 820
therapy ... 593
Surgery among the insane ... 586
antiseptics in ... 269
Surgical anesthesia, accidents in ... 270
hints ... 29, 186, 543, 745, 867
operatious, prevention of shock and infection during ... 628
treatment iu ... 241
treatment of hemorrhage from gastric ulcers ... 30
Sutures, treatment of wounds without ... 387
Syphilis, administering mercury in ... 875
iuherited ... 427
intra-uterine immunization to ... 416
researches on ... 431
treatment of with iodine ... 119
Syringes and urethral capacity ... 468

Tænia nana a cause of chyluria ... 226
Tapeworm, salol in ... 475
Tea and coffee distillates—their action on the heart and respiration ... 951
Tendon, suture of the ... 325
Testicle, excision of for tubercular disease ... 709
The dangers of holy water ... 856
harmlessness of modern warfare ... 778
[mosquito and malaria ... 780
professional spirit ... 699
Therapeutics of heart disease ... 274
of travel and change of scene in nervous aud mental diseases ... 679
progress in ... 59
vegetarianism in ... 115
Therapeutic suggestion ... 404
Therapy of herpes zoster ... 314
suprarenal ... 593
Thermometric tides in tuberculosis ... 113
Throat coughs ... 495
Thrush, treatmeut of ... 312
Thyroid extract in cretinism ... 911
in infectious diseases ... 554
Thyroidin, psoriasis cured by ... 715
Tic-doulourеux, operative measures in ... 388
Tobacco in time of war ... 942
Toes, blue discoloratiou of ... 515
local anesthesia of ... 388
Tongue, rhythmical tractions upon ... 270
Tonsillitis, treatment of follicular ... 359
Tonsils, infection of ... 237
through the ... 390
Torticollis, treatmeut of ... 545
Toxicity of heroin ... 435
Toxic sera, hemolytic action of ... 354
Toxin, diphtheria ... 590
Toxins, treatment of cancer by its own ... 35
Trachoma, the jequirity treatment of ... 716
Transplantation, ovarian ... 148
Trauma as a cause of nervous diseases ... 918
Traumatic spinal disease, a new ... 111
Traumatism ... 631
Traumatisms of central nervous system ... 280
Tricuspid regurgitation ... 281
Trional, insolubility of ... 235
Tubercular disease, excision of the vesicle, vas deferens, and vesiculæ seminales for ... 709
infection ... 237
Tuberculin test, some notes upon ... 153
Tuberculoma of the nasopharynx ... 815
Tuberculosis ... 193
acute pneumonic form of ... 391
cacodylates in ... 114
cod-liver oil enemata in ... 675
early diagnosis of ... 634
infection, treatment of by muscle plasma ... 311

Tuberculosis, medicinal treatment of.,... 831
of the larynx... 519
of the middle ear... 444
of the skin, lupus erythematosus secondary to... 595
raw meat and alcohol in... 876
recent views of... 535
stomach condition in early... 951
conditions in... 580
the diazo-reaction as an aid to prognosis in. 636
thermometric tides in... 113
the sanitarium treatment of... 780
transmission of from cow's milk... 132
of through meat and milk supply... 635
treatment of... 470
of in bladder... 73
without Koch's bacilli... 271
Tuberculous disease, excision of the vesiculæ seminales for... 146
lesions... 787
meningitis, cellular diagnosis of... 909
Tumors, epithelial—cure of by use of arsenic... 674
etiology of... 470
malignant... 308
arsenic in... 794
of the bronchus... 593
Typhoid, appendicular symptoms of... 536
bacillary metastasis in... 72
diagnostic significance of an affection of the epiglottis in... 156
bacillus... 349
fetal and infantile... 950
fever... 349
abortive treatment of... 675
and artificial serum... 713
a study of... 546
diet in... 71
feeding in... 910
hospital treatment of... 161
inflammation of the costal cartilages as a sequela of... 430
in infant... 331
in the young... 151
perforation in... 708
rupture of the spleen in... 551
serum diagnosis of... 53
some ocular disturbances in... 200
soup diet and rectal irrigations in... 748
sudden onset of... 669
summary of its treatment in Johns Hopkins Hospital for ten years... 872
in camps... 577
serum... 820

Ulcer of the stomach... 307
chloride of iron in... 794
Ulcers, treatment of venereal... 287
varicose, of the leg, a new method of treating... 788
Ulnar nerve, analgesia of in epileptics... 469
Umbilical hernia... 160
Unna's ointment in ringworm of the scalp... 918
Urea, excretion of by the skin... 352
Ureteral calculus... 188
Urethra, a case of hat-pin in the... 543
operative surgery in constriction of the... 707
Urethral capacity and syringes... 468
prolapse in the female, etiology of... 159
Urethritis, a new remedy in... 827
specific... 842
Uric acid diathesis, the... 666
Uric acid salts, our knowledge of... 548
Urinary infection, esophagospasm in... 868
tract, concretions in... 191
Urine, bile in the... 273
detection of pus in... 871
in disease, the... 309
residual, in enlarged prostate... 670
separator... 250
Urolithiasis... 690
Urotropin... 37
experimental and clinical investigations on... 30
in posterior urethritis... 714
in treatment of vesical catarrh... 913
Urticaria, experimental researches on... 515
reflex origin of... 475
Uterine carcinomata, treatment of inoperable cases of... 158
fibroids, operative treatment of... 919
hemorrhage, formaldehyde in... 760
myomata, surgical treatment of... 558
rupture, pathogenesis of... 197
Uterus, adenomyomata of—diagnosis of... 240
calcium carbide for inoperable cancer of the... 597
cancer of the... 632
malignant diseases of... 373
position and phases of the... 569
rupture of the... 477

Vaccination... 61
criticism on a new method of preparing skin for... 187
lupus vulgaris affecting the site of... 239
Vaccine, antityphoid, in gonorrhea... 395
Vaginal enucleation vs. vaginal hysterectomy... 316
hysterectomy... 353
irrigation, danger of... 720
Varicose ulcers of the leg, a new method of treating... 788
Vas deferens, excision of for tubercular disease... 709
Vasectomy in the treatment of prostatic hypertrophy... 467
Vegetarianism in therapeutics... 115
Vegetations, adenoid—indications for operative interference in... 237
Venereal ulcers, treatment of... 287
Venesection in heat-stroke... 672
Venous thrombosis in chlorotic patients... 72
Vesiculæ seminales, excision of for tuberculous disease... 146, 709
Visceral ptosis, the union of the two diastatic recti abdominales in a single sheath for... 927
Vivisection hill, Gallinger, the... 22
Vomiting, case of rupture of the esophagus caused by... 518
of pregnancy, hlistering in the... 160
indications for artificial abortion in... 679

Warts: should we treat them?... 438
treatment with formalin... 436
Weed, the fragrant... 942
Weissman theory, blow to the... 180
Whooping-cough, treatment of... 714, 437, 592
with antitussin... 753
Womh, a palliative operation for inoperahle carcinoma of the... 400
treatment of rupture of the... 440
Wounded in war... 180
Wounds of the heart and pericardium... 147
treatment without sutures... 387
Wrist, congenital dislocation of the... 747

X-rays, treatment of lupus by... 145
and skin diseases with... 396
the medicolegal relations of the... 785

THE MEDICAL AGE

VOL. XVIII. DETROIT, JANUARY 10, 1900. NO. 1.

ORIGINAL CONTRIBUTIONS.

A VISIT TO THE SABATHU LEPER ASYLUM.

BY N. S. RUDOLF, SIMLA, INDIA.

The sun is just rising red, the tops of the mountains one by one pick up the new-born day, the trees glistening with dew seem to be covered with some fairy diamond fruit worthy of Aladdin's Magic Cave.

The wind blows fresh through the deodars, and little wisps of blue smoke curl upwards from the tiny village across the valley.

The air is cold and bracing; the writer regretfully turns from the cheery breakfast table to face the ride before him.

But can this be India, the land of palm trees, heat, dust, tigers, and regrets?

It is! but at an elevation of 7000 feet in the Himalayas.

A shivering group of coolies, huddled together under a wall, are waiting to carry the luggage.

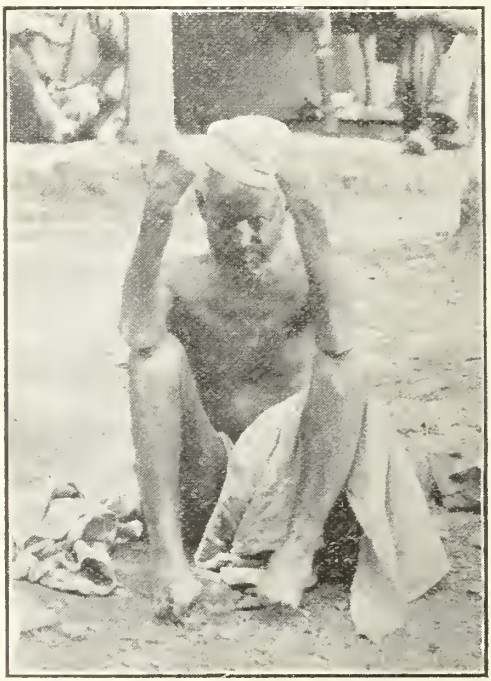
The ponies, one a rough hill pony for Mahommud Yar Khan, my servant and companion in many weary journeys, and the other a gray half-bred Arab, pretty as paint and full of spirit, are waiting, the latter showing by unmistakable signs that he for one is quite ready to be off.

Carefully the ponies pick their way down the steep stony road that leads from Kasauli to the brewery. After a descent of a few hundred feet it becomes almost too dark to see in the deep shade of the high, hilly ridge, which we presently ascend, turning aside from the main road to the top of the little pass, where a glorious view of a pleasant valley bursts upon one.

Following a long winding road which zigzags down the sides of a valley, once more we are on fairly level ground, with a pleasant sunny

ride between high hedgerows which remind one of an English country lane. Picturesque little groups of houses are dotted about this plain, surrounded by apricot and cherry trees, each patch having its watch-dog, who gives us a genial wag of his tail when he sees that it is only a sahib, not likely to rob the orchard.

A flock of goats comes wearily along the road, and a refreshing draft of milk is begged from the goatherd, a rosy-cheeked Pahari maiden.



Partial loss of extremities.

At the long steep descent which follows, the sun, which is now high risen, dispels any illusions which one might have had as to its want of power at the start of the ride.

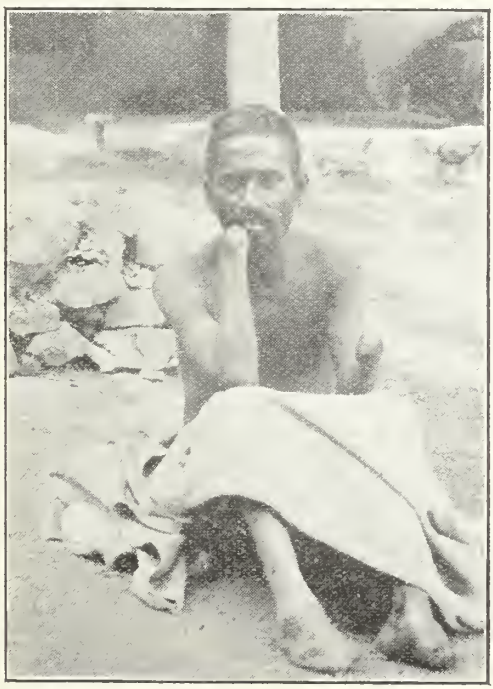
The valley is narrow, as we get lower and lower; every foot we descend seems to raise the temperature a few degrees.

Of course this was an exaggerated view of the situation, for at that rate we feared we would be broiled by the time we reached the river, some hundreds of feet below. Our fears were not entirely realized, but very nearly, and the wade which I had to take through the swift rushing cold water was distinctly refreshing.

A steep climb up a loose sandy road which is being repaired changes a tropical to a temperate climate, and the military station of Sabathu is reached.

A couple of miles further on a large sign-board on the road announces Sabathu Leper Asylum, and that visitors are welcome. The board does not state that it requires a mile of steep up-hill tramp to reach it, but leaves that for the wayfarer to find out for himself.

A little further and the Dak bungalow is sighted. The khansamah



Complete loss of hands and toes.

(butler) is interviewed, and upon casual inquiry seems able to supply anything and everything in the way of refreshments. A stern command for him not to speak "undas batt"—Anglice, "uncertain talk"—reveals the fact that he has only a couple of thin fowls, and even those are flying round wildly in the compound, having doubtless by sad experiences of the fate of their fellows learnt what the arrival of a sahib means for some one or more of their number.

The forethought of the Kasauli hotel proprietor is now appreciated, as after an hour's wait the coolies arrive with a well filled provision basket.

Towards evening the writer strolled over to the Leper Asylum, where he received a welcome from its superintendent, Dr. M. B. Carleton.

One usually associates the word asylum with some vast brick building surrounded by a dead wall where the inmates live a dull life of rule and regulation. But at Sabathu Leper Asylum it is different; situated on the crest of a wooded ridge, the lepers find a peaceful home. Their houses, roughly and cheaply made, but picturesque, are scattered over a large area of ground.

The first house we come to contains about a dozen lepers, each in a little room which is often shared by the wife or husband, as the case may be, of the unfortunate patient.

No need to dwell on the horrors of the fell disease of leprosy; the accompanying photographs show what are its effects. And no description would give an idea of the unpleasant features of the disease which appeal to other than visual organs.

What strikes one most is the hopelessness of the disease; all the resources of medicine and surgery are powerless, and can only alleviate for a time but not cure leprosy. The treatment which at one time seemed to yield the best result was dressing the sores with deodar oil (*Cedrus Deodara*). Chaulmoogra oil (*Gynocardia odorata*) has also been extensively tried, and it is held in high esteem by the Hindu physicians.

It does not appear, however, that any treatment does more than slightly arrest the progress of the disease, and when treatment is stopped it often progresses more rapidly than before.

Leprosy may appear in two forms—the tubercular and the anesthetic. In the former the outward symptoms are not so marked, but these patients I am given to understand do not usually live so long as those affected with the anesthetic form. In the anesthetic form excessive disfigurement is usual, but pain is not experienced to any extent, except in the earlier stages of the disease. The actual parts affected are so numbed that the sufferers frequently burn or cut themselves accidentally. Several patients at the asylum had bad burns which they had incurred while cooking their food, and did not discover the burn until they saw the blisters or smelt the burning flesh. The progress of the disease is very uncertain, and after a certain amount of destruction of tissue and bone has taken place, no further manifestations may occur for months or years.

Anesthetic leprosy is not by any means a fatal disease, and the patient is quite likely to die of some other complaint. But although the disease is not very fatal, it is incurable. The final report on the modern leper must be much the same as it was in Old Testament

Deformities in hands and feet, lepers of Sabathu Asylum.

Group of lepers at the Sabathu Asylum.

times, when the chronicler wrote: "The leprosy shall cleave unto thee and unto thy seed forever."

Many of the lepers have lived nearly all their lives in the asylum; a few were there before Dr. Carleton took charge, and he has been there for over eight years.

One is struck with the kindliness that each shows to his fellow in affliction, but they have a good example always before them in the superintendent, whose voice and whole bearing seems to take on a kindlier tone when he addresses one of his charges. Contact with suffering is said to have a hardening effect, but in the case of this gentleman the reverse seems to be the case.

The air of cheerfulness pervading the whole establishment is one of the most wonderful aspects of the institution. A venerable old patient seems almost proud of the stumps which only by courtesy could be called hands.

The question of greatest interest to most of us is as to whether leprosy is contagious or not. Many are the opinions that have been expressed on this subject, and fierce the disputations that have been waged; and even Dr. Carleton, after his many years of investigation, gave it as his opinion in answer to the writer's query that he did not know.

Some years ago the Indian government appointed a special commission on leprosy, and from their report it appears that they could not get sufficient evidence to prove for certain that the disease is propagated by contagion.

There are many instances of a leper and a non-leper living as man and wife without the healthy one contracting the disease. On the other hand several cases are reported in which some casual inoculation of the leprous matter seems to have resulted in the propagation of the disease in a subject free from previous taint.

Still, the writer was given to understand that no case of leprosy had occurred among the attendants at the asylum, who dress the lepers' sores and rub in oils and other applications with their bare hands.

Apart from any risk of contagion, which has not as yet been proved satisfactorily not to exist, it is not desirable to allow pauper lepers to wander at large over the country, both for their own sakes and for the well-being of the communities in which they may temporarily reside. At present the subject is receiving attention from the governments of the various provinces of India, and ere long we may hope to see some effective measures taken for the segregation of the lepers.

One of the saddest sights in the asylum was that of the two European lepers, one a youth of about eighteen and the other a young lad.

They have separate quarters provided for their accommodation, and although all that was possible had been done for their well-being, the task of preventing the time hanging heavily on their hands was not an easy one. But on the occasion of my last visit to the institution some two years later, and which was made only a few weeks ago, a well educated woman, herself a sufferer from the same disease, had lately arrived, only too glad to find that there was work for herself in taking care of the other two. Much can be done by this lady for the two boys, and her care will be of special value for the younger one, who has recently become blind from the effects of the disease.

One of the principal difficulties in the past seems to have been to keep the inmates occupied, and they are given little patches of land, on which those who are able and willing endeavor to raise crops of maize and other grains and vegetables, but this year the want of rain has sadly interfered with their small agricultural efforts, and from the look of things the results, so far as harvest is concerned, will be *nil;* but it has kept them amused.

Last year, however, several acres of good land, situated on the sides of a warm and sunny valley adjoining the asylum, was purchased, and as there is plenty of water from a spring, heavy crops of maize, rice, turmeric, potatoes, ginger, etc., are being raised. A small garden of English vegetables is also being planted out, and a portion of these will be sold in the neighboring military stations, where they fetch good prices. The other vegetables and maize will be used in the asylum, and the garden will thus serve the purposes of providing food and a little money, and more than all, of keeping the inmates amused and out of mischief.

The care of some ninety lepers of varying religions and castes is no light matter, and very interesting it was to hear from Dr. Carleton's lips the account of how the whole establishment is conducted, and the various unforeseen difficulties that arise only to be combated and give way to others.

The inmates are given weekly supplies of food and stores, and these they are allowed to cook themselves, as of course with so many different castes it would be impossible for cooked provisions to be issued.

The whole establishment is supported by subscriptions received from all parts of India, and even, as the subscription list shows, from the United States.

POLIOMYELITIS ANTERIOR ACUTA.

BY CHARLES MASON, M.D., PEEKSKILL, N. Y.

This disease was described by Underwood in 1784. Dr. Seguin, in 1877, published an admirable monograph containing over forty cases. Since that time many valuable contributions to this affection have appeared.

It is not my purpose to enter into an exhaustive description of this affection, but to describe some of the symptoms, results of treatment, and present condition of the cases that have come under my care in private practice, and to call attention to the singular fact that five cases occurred during four years within a radius of five miles.

Some authors have so divided and subdivided the affections of the cerebrospinal system that the reader is greatly confused when trying to understand their descriptions. According to Holmes Coote, among 1000 children admitted to the Royal Orthopedic Hospital there were 80 cases of infantile spinal paralysis, or 8 in 100. Among 192 cases of paralysis occurring in children, Heine, Jr., observed 158 of spinal origin, of which 84 were cases of partial paralysis. This affection is characterized by motor paralysis of rapid onset, with muscular wasting, sensation remaining intact. No age is exempt; the average is two years; it may occur intra-uterine (Sinkler). There are more males than females affected, although the contrary would be inferred from the cases reported in this paper. The majority of cases occur in hot weather. Age, season, and infectious diseases are the most important factors, and its subjects are apt to be the children of the destitute poor, especially those who come of drunken parents.

The onset is usually sudden; temperature, 100° to 102°; paralysis may develop in a few hours or days; fever lasts from one to four days. Vomiting, delirium, and convulsions may occur; pains in the back and limbs are usually present; the bladder is seldom paralyzed; the extensor muscles are oftenest affected; paralysis is most frequently paraplegic—first one leg, then the arms and legs, and after that various combinations. The muscles of the eye, larynx, and respiratory apparatus are never affected in infants. In one-fourth of the cases both legs, and in one-half the cases one leg, usually the right, remain affected. Owing to unopposed muscular action, the various forms of talipes develop deformities of the knees. Contractions of the plantar fasciæ and lateral curvature of the spine occur. The anterior tibial in the leg and the deltoid and shoulder group in the arm are oftenest affected. Atrophy of the muscles after reaching a certain stage ceases, then slight improvement can be expected. Lowered tempera-

ture and diminished growth in limbs are very characteristic of this affection. The general health remains unimpaired.

This disease must be distinguished from multiple neuritis, spinal hemorrhage, cerebral palsies, birth palsies, progressive muscular atrophy, and simple and tubercular meningitis. The main symptoms in the latter affection are so unlike those in poliomyelitis anterior that one would suppose that they could not be mistaken; but such is not the case, for there is a period in some instances in both diseases when the symptoms are not pronounced, and to make a diagnosis is very often perplexing, and sometimes impossible. In the cases that have come under my care, every one of them was in many respects dissimilar. The onset in two was gradual, while in the other cases it was attended with very acute symptoms.

The following points in the case may assist in making a diagnosis: (1) Age of the patient; (2) abrupt onset and rapid, extreme paralysis; (3) the tendency to improve; (4) bladder and rectal symptoms wanting, absence of anesthesia, rigidity and pain in the affected limbs; (5) the electrical reaction in muscles; (6) the limbs are arrested in their growth (Dana).

Patients rarely die of this disease: the usual course is for cases to recover the use of all but one leg.

As regards causation, it is believed by many that the primary atrophy of the nerve cells of the anterior horns is the point of departure of this disease. As Sinkler has demonstrated that the disease occurs *in utero*, may it not be occasioned by the tardy development of the spinal anterior horns, and may not the straightening of the feet during the first few months of life, without mechanical or other appliances, be wholly due to the development as the child grows? Although orthopedic surgery may have been brought to the little one's assistance, how much may not the development of the cord have assisted in the final cure?

In the cases that exhibit high fever, great excitement, and prostration, with cerebral symptoms, antipyretics are useful; attention should also be given to the cerebral symptoms. Local pains should be treated by applications of ice. Every case requires absolute rest.

The salicylates are indicated in those cases that are supposed to be of rheumatic origin, and locally warm applications and fomentations. Depletion by leeches, or cupping, is often beneficial to relieve local pains. In the beginning a brisk purgative is beneficial. Diuretics are of advantage; counter-irritation to the spine is useful. Small doses of the tincture of aconite, if fever is present, are of benefit. Ergot and belladonna in full doses, according to age, with iodide of potash, is indicated. The patient's limbs must be kept

warm. Electrical treatment is of great benefit in many cases. As regards medicines in long standing cases, the preparations containing phosphorus, strychnine, iron, arsenic, cod-liver oil, and physostigma are thought to be useful. These remedies are for the improvement of the general health.

G. C——, aged ten years at time of onset; a strong, vigorous girl; family history negative; parents unusually healthy. Retired feeling tired and ill; arose in the morning after an unrestful and disturbed sleep, and attempted to cross the room, but fell; on arising her legs gave way a second time. On examination it was found that both legs were paralyzed. She had no fever or other signs of illness, but suffered with cramps in the muscles. After three months she began to improve, and the left leg has entirely recovered. The right leg remains in a semiparalytic condition. The great toe of the right foot is in a normal condition; the other toes are paralyzed. The thigh and leg are much smaller than the left. She seems to be in fairly good health, but has the appearance of a delicate girl, although she is quite fleshy. She is now nineteen years of age.

C. R——, female, five years old when taken ill; family history negative; parents healthy, as also the other children. Patient was an unusually strong, healthy child; had had measles and scarlatina, and made good recovery; had had intermittent fever. When taken ill it was thought she was afflicted with inflammatory rheumatism; had some fever, with pains in the lower extremities. When the fever subsided it was found that she was paralyzed in the lower limbs, which paralysis still remains at the age of sixteen years. She can move the middle toe of the left foot and can flex and extend the right ankle-joint very slightly; all the toes of the right foot are paralyzed. Both limbs are the same size, large, and have a peg-like appearance. The calf of the leg is not prominent, as in health; the legs are cold and have the usual mottled appearance; general health excellent. She is an expert shirt-maker, working the treadle of the sewing machine by placing her hand on her knee and thus forcing the movement. She has received electrical treatment, but without benefit, at one of the orthopedic hospitals in New York City.

R. T——, female, aged five years and six months when taken ill. Previous health good; had had none of the usual children's diseases, but had had intermittent fever. All the children (five) have what is usually termed nervous temperament; parents and children healthy; father somewhat intemperate. About three weeks previous to the attack she was pallid and complained of feeling ill. As she was apt to feel and to look thus in consequence of intermittent fever she was given some quinine. On going to bed on the night of

her illness she complained of aching limbs, pains running to the ends of fingers and toes. At three o'clock in the morning she began to cry with pain and wished to get out of bed and walk. Said that her spine pained her in the dorsal region. In the morning, on attempting to walk, she fell on her knees, and a second attempt had the same result, after which she was placed in bed. I saw her about eleven o'clock that morning. She had some fever, both legs were paralyzed, and she has never regained their use. She is now sixteen years old. The upper extremities and the body are well nourished and developed; the lower extremities very small. The hamstring muscles are contracted in the right thigh, and ankylosis has taken place in the right knee. Both feet have the appearance of dropping away from the leg and are adducted. Can flex all the toes very slightly. Left leg three-fourths of an inch larger than the right. Has a very slight movement of the ankle-joint. Both legs are cold and mottled and evidence fatty degeneration of the muscular tissues. This young woman runs a sewing machine and makes shirts. She uses her left leg, and with her hand on the knee causes the movement of the treadle. She is an expert operator.

M. L. V—— was taken ill in her seventh year. Family history negative; both parents are robust and healthy. The child was remarkably healthy and strong; no apparent cause for her illness. She was ill four weeks before the paralysis developed. Both limbs are paralyzed; they are of the same size and have the usual characteristics—*i.e.*, cold, mottled, with tissues soft and flabby. She has received electrical treatment without benefit. She is a large, remarkably well developed young woman, and except for the persistent paralysis is perfectly healthy.

M. B——, male, aged forty-eight years; family history negative. He had always enjoyed good health and was used to hard manual labor. On January 9, 1894, he was exposed to severe cold by remaining during a cold night in a building without a fire. This is the only known cause for his illness. Within a week he complained of feeling weak in his legs, and said they did not feel natural; he also complained of some pain in the back. At the expiration of four days he could not go up-stairs, and the next day he could not walk without assistance. He remained sitting in a chair the greater part of the time. The pains in his limbs and back disappeared during the first week. At the beginning of his illness he had some fever and a slight rise in his pulse. On the eighth day it was necessary to change his position to allow his arms, which had become almost useless, to rest on the back of the chair. On the tenth day it was noticed that he

was not breathing naturally, and he complained of shortness of breath. His swallowing and articulation were very perceptibly interfered with; his mind remained perfectly clear. He would intimate to the nurse that he desired to empty his bladder, or to have his bowels move, over both of which organs he had perfect control. Normal sensation continued in the upper and lower extremities. Muscular wasting was taking place in the limbs. The medulla oblongata became involved, and he died of asphyxia while sitting in his chair.

This case seemed to be one of acute ascending paralysis of Landry, or poliomyelitis anterior acuta in the adult, although in many respects it was like acute myelitis; but, unlike the latter affection, there was entire absence of the sensation of constriction around the body, and the usual sensation of pins and needles in the feet; also the usual bed-sores which attend this affection, which may occur at the beginning of the second week or earlier. The sensitiveness and pain of the limbs when they were moved, the absence of rectal and vesical paresis, all indicate that the trouble was located in the anterior horns of the spinal cord.

M. D——, aged three years; family history negative; parents strong and vigorous. She was seized with convulsions, loss of consciousness, of intelligence, and of speech, strabismus and dilatation of pupils, and remained in this condition, with slight intermissions in the convulsions, the greater part of seventy-two hours, though toward the last they were on one side only. At the termination of the convulsions the child was paralyzed on one side, including the face, and remained in this condition for over three months. At the end of twelve months she began to talk as though she was a baby and had never talked before. She has never recovered the complete use of her arm, leg, or foot, but seems to be improving slowly. The expression of her face is about natural again, and she talks fairly well, but with a tendency to stammer.

The paralysis, both motor and sensory, in this case was so complete that the child did not know that her arm was being burned on a hot stove, and never complained of pain when it was being dressed and handled.

This case is cited as a comparison between an affection of the anterior horns of the cord and paralysis secondary to acute cerebral apoplexy. The lesion in this case involved the anterior two-thirds and posterior third of the internal capsule, producing the symptoms of hemiplegia and hemianesthesia.

This case was very instructive to the laity. As most of the cases occurred in the same locality, the parents and others imagined that

all were similarly affected; but when this child was burned and did not know it, the extreme sensitiveness in the other cases was a convincing argument to them that the cases were not similar.

The discovery that some of these unfortunate cases were using their limbs induced me to examine them very carefully, for I have often thought the want of use was in a large measure responsible for some of the wasting of the limb; or, in other words, some general improvement could be brought about if the limbs were used. But in this I was wrong, for not the least apparent benefit has been gained, and the only result of the continued use is manifested in the increased size of the unaffected muscles.

The writer desires to acknowledge valuable assistance received from the following: E. C. Seguin: Myelitis of the Anterior Horns; C. L. Dana: Nervous Diseases; A. Jacobi: Therapeutics of Infancy and Childhood; W. A. Hammond: Diseases of the Nervous System; A. McL. Hamilton: Nervous Diseases.

ERRORS OF REFRACTION AND BLEPHARITIS MARGINALIS.

BY WILLIAM CHEATHAM, M.D.,

Professor of Diseases of the Eye, Ear, Nose, and Throat in the Louisville Medical College, etc., Louisville, Kentucky.

Even before the reading of Professor D. B. St. John Roosa's paper in 1878 on the above subject, and especially since, there has been considerable discussion upon the part played by errors of refraction in the causation of inflammation of the edge of the lids.

In this paper I wish to exclude the classification of blepharitis marginalis, and to exclude those cases caused by tear duct trouble, suppurative conjunctivitis, and trachoma.

This affection, as other diseases of the eye, has many causes, both remote and proximal. For instance, malaria, gout, rheumatism, so-called scrofula, bad teeth, affections of the nose, affections of the eye muscles, wind, dust, poor light, bright light, and heat are causes mentioned in our books.

The questions I wish to present, though, are: (1) Do errors of refraction play any part in the production of blepharitis marginalis or its continuation, and if so, how much? (2) How important is it to correct errors of refraction in this affection, and should we insist upon the constant use of spectacles when there is such an error? To these questions my answer, it will be observed, is my personal experience. Taking my case-book as a reference, my experience has been that in a very, very large majority of cases of blepharitis marginalis I have seen there existed errors of refraction, and in most of these astigma-

tism; the latter especially I found in the adult, because it was easier I believe to determine. I believe it is extremely important to correct this error, first as a curative measure, and again as a preventive of relapses.

As I before stated, my case-book bears me out in these statements. I have seen numbers of cases of hyperemia of the margins of the lids yield readily to the use of spectacles with no other treatment. I have seen such cases go on to what might be called blepharitis marginalis of the second stage, with scales on the edges of the lids, yield to atropine sulphate, which put the accommodation at rest, relapse when the atropine was left off, again relieved by atropine, and permanently so by correcting an existing error of refraction. Such cases are not rare in my experience. I have seen such cases with corneal opacities, irregular astigmatism, relieved by atropine, relapse after the atropine is left off, and incurable because the error cannot be corrected by glasses. These cases belong, of course, to that class in which there is little or no constitutional dyscrasia.

I recognize the fact that in many cases there are several factors in the production of this often obstinate affection, but an error of refraction is, I believe, one of the more important in a majority of such cases, and I believe but for the error of refraction the dyscrasia would frequently have shown itself, if at all, in some other portion of the economy.

Let us inquire now how an error of refraction can produce such an effect. I recognize with a majority of the profession that the most common cause of hyperemia of the conjunctiva is an error of refraction. We of course have it from other causes. The association of hyperemia of the conjunctiva and inflammation of the edges of the lids is exceedingly common. There is really but little difference in the anatomy of the parts involved. I recognize (and none of this is original with me) that keratitis, especially the phlyctenular form, can be produced by an error of refraction. I believe a hyperemia of the iris, which is the first stage of inflammation, can be caused by an error of refraction; choroidal irritation, retinal irritation, and inflammation I have seen produced by an error of refraction; headaches, vertigo, nausea, and many other symptoms are produced by errors of refraction. If these, then, why not a hyperemia of the edge of the lids, which if the cause is not corrected can go on to blepharitis marginalis of any stage? Or if the third and fourth stages of blepharitis marginalis are microbian, was not the error of refraction the original cause, preparing the soil by producing the hyperemia? I dare say that all will admit the frequent association of blepharitis with errors of refraction, but possibly do not believe as I do that

the error is in a large majority of the cases the original cause; yet I expect the error is usually corrected with any other treatment pursued.

The books on diseases of the eye, I believe, associate the two and advise the correction of any existing error.

This, then, is the answer to the questions asked in the early part of this paper. Blepharitis marginalis is in a majority of cases associated with an error of refraction; this error of refraction acts as a cause in its production and in its continuation; in many cases it is the only cause, and if this error is corrected it will cure a great majority of such cases without any other treatment. Many such cases cannot be cured permanently by any other treatment. The error acts by what is known as reflex irritation, acts in the same way as in its production of irritation and inflammation of other portions of the eye and its surroundings, and in its production of headache, vertigo, nausea, etc. I have seen cases of blepharitis marginalis in which there was no error in refraction, but they are greatly in the minority. I have seen cases with and without errors of refraction which no treatment relieved.

The prognosis in cases in which there is no error of refraction has been, in my experience, very much less favorable because there has been some constitutional dyscrasia at the bottom, difficult to correct.

I am forced to these conclusions by my own experience and that of the authors of such books upon diseases of the eye as I have read in recent years. Almost all the authorities mention this association and advise the correction of errors of refraction; it not only produces blepharitis marginalis, but especially hyperemia of the conjunctiva and simple conjunctivitis, the most common associates of blepharitis marginalis.

De Schweinitz (page 219) gives a list of local irritants as causative in conjunctival hyperemia, and says that marginal blepharitis frequently accompanies it; he also says: "The strain of ametropia furnishes a large contingent of these cases, while others arise when the refraction is insufficiently or improperly corrected." He gives also beginning presbyopia uncorrected, and incipient catarrh and opacities of the cornea, which produce an uncorrectable irregular astigmatism, as causes. On page 221 he says: "Symptomatic conjunctivitis [which he makes one of the subdivisions of simple conjunctivitis] may arise from strain of ametropia." Page 267: "In the belief of some authors astigmatism bears a relation to the development of phlyctenular keratitis."

Norris and Olive, vol. iii, page 204, in the treatment of phlyctenular affections of the eye, say: "Schoolchildren in particular should be

carefully examined as to their optical condition, and all anomalies of refraction carefully attended to." On page 176 of the same volume eye-strain is given as one of the causes of hyperemia of conjunctiva; and on pages 76 and 77 Norris and Olive say: "Blepharitis marginalis is the result of strain induced by defects in refraction." Under the head of treatment they say that in mild cases the correction of optical errors and rest of eyes alone will bring about a cure.

I wish to ask just here, what is the result after a cure if the glasses are left off and old habits resumed? In such cases I do not care what local or general treatment is pursued; no permanent cure results without the use of the glasses.

Berry, page 4, under the head of treatment of blepharitis marginalis, says: "Hypermetropia and astigmatism have certainly some influence in keeping up, though it is unlikely that they actually, as many suppose, give rise to, this condition."

Noyes, page 83, in discussing asthenopia with errors of refraction, gives with other symptoms blepharitis marginalis, chalazia, styes, and hyperemia of conjunctiva. Again, page 230: "In very many cases it (blepharitis marginalis) is associated with some refractive or muscular error, and is only an expression of functional strain for which no local remedies will avail, until proper glasses or other corrections are employed." Under the head of treatment he says: "But if the person be the subject of error of refraction or of other error which causes eye strain, the removal of the blepharitis will not only demand the usual local treatment, but also that the error be corrected."

Fuchs, page 475, gives as one of the causes of inflammation of the border of the lids great straining of the eyes. On page 45 he says that excessive straining of the eyes, especially in hypermetropic or astigmatic persons, can result in chronic catarrh of the conjunctiva, and on page 44: "Among the most frequent complications of chronic catarrhal conjunctivitis is inflammation of the edges of the lids."

De Schweinitz, page 158, gives as a cause of hyperemia of the lid border, strain upon the accommodation; also that use of the eyes quickly increases the congestion of the lids. Page 200: "There is no doubt that it (ametropia) aggravates and fosters the condition." He advises on the same page, in the treatment of blepharitis marginalis, the correction of refraction of all such eyes by suitable glasses; he says that this will often cure a hyperemia of the lid margin. On page 148 he says: "As a result of hypermetropia the coats of the eye become inflamed; conjunctivitis, blepharitis, and congestion of retina and choroid are very frequent complications."

VITAL STATISTICS AND HEALTH LAWS.

BY A. F. FUCHS, M D., LOYAL, WISCONSIN.

If we look over any of the many fields into which medicine is subdivided, we are struck by the large amount of literary work that is being done. Much of this work bears marks of being mere copies, most of it is at best but compilations. Errors, inaccuracies, and untruths are thus copied and recopied, until the original source is lost. The incredible rate of speed at which we are pushed on, the rapidity with which events follow each other, tend to keep the average mind in a state of confusion. Under the best of conditions judgment is difficult, but it is next to impossible to form any judgment of the value of one or other of the many things daily called to our attention. In our desire to be with the crowd, or in the van, we enter into the mad rush after big and brilliant results, and we miss the gold that is being swept down with the tailings. It is certain that the State has a right to gather vital statistics, consequently she may use all proper means toward that end. No truly enlightened nation should be without a record of some kind of all births and deaths occurring within its boundaries. Such a record, if properly used, may be made to serve many other purposes besides giving information concerning the rate of births and deaths. The history of the people could be more closely studied, and the influence of environment upon body and mind more surely established. In short, according to the data embraced in the records, we would be in a position to shed light upon many obscure points, and to a degree foretell, and possibly forestall, future events. The value of vital statistics to the State, to the student of sociology, history, and anthropology, is certain. To my knowledge the United States is the only country with some just pretensions to enlightenment which has no vital statistics. Naturally we ask, what is the reason for such a state of affairs? A sufficient answer would take up too much time, and is beyond the range of this paper. In my opinion, so long as the present system of filling public offices obtains, so long will vital statistics not be realized, unless the function of gathering them is placed where politicians cannot meddle.

It is my intention to point out in this paper, first, what use vital statistics do not serve; secondly, to call attention to fundamental errors in our present law; thirdly, to submit a rough plan of a vital statistics law for consideration; and fourthly, to make some remarks on health laws and health boards.

Vital statistics are not medical statistics; the two differ fundamentally. It follows that vital statistics are of no use to the physician,

as a physician. He cannot, from a study of vital statistics, say whether disease is frequent or infrequent in a given place, nor can he tell whether his profession has influenced mortality-rates for evil or good. Vital statistics are not a basis out of which something else grew; least of all could hygiene grow out of vital statistics. Sanitary boards and commissions are not, and never have been, called into being by virtue of conclusions drawn from vital statistics. Quite the contrary, the data furnished by such statistics—so far as we know them—seem to confirm the view held by the best authorities, namely, that the birth- and death-rates are subject to immutable laws, and are not favorably influenced by the tinkering of health boards or legislators. Vital statistics alone teach us nothing; they tell us much. They do not furnish unerring lessons of any kind, excepting only that it is quite certain that a people are not "to be their own Sir John Sebright" in conditioning so much as numbers merely. As I said before, the physician learns nothing, and can learn nothing, from statistics, which better qualifies him to act as a healer of the sick. Statistics are merely records of quantities, not of qualities. To a degree of course they record quality, as, for instance, male and female, etc. These qualities, however, appear in the record only to bring out number. We are after the numerical ratio of males to females, whites to blacks, nurslings to five-year- or ten-year-olds, middle-aged to very old, etc. Hence, the physician who depends upon vital statistics for information as to the extent and character of epidemic disease might study mortality tables a century and be none the wiser. The uninitiated student they are likely to confuse.

I have tried hard to imagine what benefit vital statistics are to the police in the detection and punishment of crime, but have failed to see any connection. Certainly a study of statistics, as also of geology and astronomy, will broaden the intellect, and thus better fit us, or any one else, for the duties of a chosen calling. But that is no reason why I should advise a police officer to study birth and death records in particular. Neither can I see why we should be advised to go to these records for information on insanity, the neuroses, and degeneracy. It may be that as we have been told nothing about degeneracy, and little concerning insanity, by the informed, a study of statistics can certainly not be more disappointing, probably less.

We, as a profession, are interested in all forms of disease; why then, it may be asked, are we not given some information on insanity by the medical men of our State and county asylums? It is a deplorable fact that the fountains which are full to overflowing yield nothing to the world of science, or to our art. Do not understand that Wisconsin is the only State that labors under such a condition of affairs;

all other States are in the same rotten boat. Instead of setting an example, medical men slide along in the same easy, well-worn rut occupied by the politicians and the citizens at large.

I suspect it is now generally admitted that our last vital statistics law is defective. As the Wisconsin State Medical Society is the putative father, we should see to it that our offspring be quietly and quickly buried. All I ask is a burial permit; it needs no death certificate, as the monstrosity was still-born. How could it live presenting the following abnormalities precluding life?

That part of the law pertaining to deaths and burials contains a clause providing that no body shall be buried or incinerated without a permit. Such permits are to be issued upon the certificate of a physician, coroner, or justice, and the certificate to be forwarded to the register of deeds, to be recorded. Now it frequently happens that the death occurs in one town or political corporation, and the body is disposed of in another. Hence would follow the necessity of two permits, one for the removal, the other for the burial. Each permit presupposes a certificate, hence two certificates. As these certificates form the basis of the mortality records, a person dead may run considerable risk of being twice dead and buried in an official way. The mortality tables would be faulty.

Another defect is, that any physician employed by the health officer shall make out the certificate; if no physician is obtainable, then a justice shall make it out. Apart from the latitude allowed, and the concomitant vitiation of the statistics, and what not else, what is to prevent a doctor and the proper official from forming a silent partnership, and calling upon the town to pay a nice sum annually?

Another fault lies in the fact that regarding the person who shall issue permits the law is not mandatory. It is either the health officer or clerk; hence persons in want of a permit must first find out who issues them. This little matter alone is sufficient to disturb the smooth working of any law, but a legally defective law it cripples past cure. Remember that a health officer is supposed to exist in every town or municipal corporation, and the fact that he may not exist presupposes a neglect of duty. This law, then, not only winks at a neglect of duty, but sanctions the same. The health officer is an appointee of the board or mayor, therefore the majority of the citizens do not know who occupies the position. A man may drive twenty or thirty miles through slush and mud after a permit, and then be told that the supposed health officer had not and would not qualify, and therefore could not make it out.

There are a number of general objections to the law which, while not vitiating it legally, needlessly hinder and make difficult and expen-

sive its operation. First among these objections is the senseless repetition of the thing to be recorded. Note, please, that the maiden name appears three times, the color or race twice. Also items appear where they certainly do not belong; others are needlessly extended. Why, under age, extend it out to months and days, seeing that any one interested can figure it out from the data at hand? Then there is the lack of concentration or proper grouping. The name, sex, age, color, cause and date of death, etc., should be together and not scattered. The blanks are three times larger than necessary, unless they were especially designed to facilitate waste of State and private funds, and make prominent the faulty law which is printed on the back.

Proceeding upon the principle that we must keep out of politics and party management with any statistics law if we desire results, I present the following for consideration: The establishment of a statistical bureau, under the direct and absolute control of the State Historical Society, the society to be given sufficient funds, incidentally, to enforce the law by vigorous prosecution of the offenders. The town, village, or city clerk to be the first depository of certificates; he to record them in a special book, to issue permits, and to forward the original certificate, or an abstract of his record, every sixty days to the State Bureau. At the close of the official year he should send in a statement of the births and deaths by names only, for purpose of comparison. Permits to have clerk's seal attached, to go with body, be of force throughout the State, and to be destroyed when body is finally disposed of. Like permits from neighboring States to be of force in this State. Let me close by saying that there should be no compensation for certificates, and that preliminary to the statistics law cemeteries, etc., must be incorporated.

Incidentally to the main object of my paper, I thought I might touch upon our present health laws, in order to arouse attention. It seems to me that the laws under which we work as health officials should never have found a place upon our statute books. The health boards as constituted under them are a farce; the officers are, as a rule, about as efficient as such officials were two hundred and more years ago. What Richard Mead said, 1715–20, may be applied to our present system. "Such methods," he said, "are inhuman, not just, and only serve to breed disease." And Sonderegger said at the Vienna Congress of Hygienists: "It is a fatal error to suppose that any, even the most carefully conducted, operations of sanitary police avail during an epidemic, if general hygiene has been neglected." "The control of infectious disease," said Hueppe, "begins and practically ends with the treatment of a given case. When these diseases become epidemic, sanitary police regulations serve no purpose; such epidemics

are phenomena *sui generis*." Another authority said: "We do not need new editions, amendments, or reprints of old laws, health board regulations and reports, but a thorough doing away with them, and a fundamental reconstruction." With these men I am in accord.

Year after year we are told by State health board officials that they have abundant evidence on hand going to prove that good work is being done under their administration. Shall we accept all they say in good faith, or is it asking too much to demand a sight of the evidence? Officially they proclaim that "all is well," but the medical and secular press tell a different story. We are told that a national board is needed, if anything like efficient work is to be done. We are told that smallpox prevails in one State, yellow fever in another, and that the national authorities must be called in; that no funds are at hand to isolate and care for the sick, or to feed the exposed; that the shotgun and club in the hands of the private citizen, the militia under the State authorities, are in control of affairs.

In closing, let me make plain my position, and what I contend for. I desire to see the State wherein I live occupy a foremost place in all things that I value. I value education, industry, good conduct, stable institutions and laws, justice, peace, frugality, and a fair measure of liberty. I value a proper administration of public affairs, and the general welfare of the people. Therefore I consider it my duty to do what little I can toward a realization of my ideals. As my chosen calling and my daily studies qualify me somewhat to speak on that branch of the public service having to do with the gathering of vital statistics, and with State hygiene, I shall make it my special duty to call continued attention to the faults that obtain. So long as health board officials persist in publicly, and at public expense, stoning germs with greenstone, and to have laws and regulations enacted that are structural malformations and medieval pseudoscientific vagaries, so long will I continue to call attention to a faulty system, and the work under it.

Two children, according to the *Medical Record*, died not long ago, one at Brewster and one at Geneva, New York State. The deaths occurred after vaccination, and were said by the antivaccinationists to have been caused directly by this operation. The State Board of Health has, however, investigated the cases, and finds that death in each instance was due to the neglect, ignorance, and filthy habits of the parents, and failure on their part to carry out the instructions of the physicians who performed the vaccination. One child died of tetanus, and the other of septicemia.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

BRONZED DIABETES.

The bronzed cachexia of diabetes has long been known as a frequent clinical indication of that disease. The formation of the pigment has been a subject of much difference of opinion. The nature of this hemochromatosis has lately had renewed interest imparted to it by the presentation in this country of two cases of bronzed diabetes (diabète bronzé). One such case of this comparatively new and extraordinary disease has been reported by Dr. Osler, another by Dr. H. W. Berg, of New York.

French literature is somewhat fertile in reference to diabète bronzé. Hanot believed that the liver was the seat of the origin of the pigment. Letulle considered the liver stored but did not form the pigment, and regarded the accompanying cirrhosis as a secondary matter. Marie has suggested that diabète bronzé is not a pigmentary cirrhosis in diabetes at all, but a pathological entity, a new disease. The German investigators have usually regarded pathological pigmentation as a result of anemia. In cases of generalized pigmentation two substances have been isolated, one hemosiderin, containing iron, and one hemofuschin, which does not contain iron. In the general hemochromatosis of cirrhosis hemosiderin is the substance which gives the characteristic appearance.

The cirrhosis of bronzed diabetes is presumed to be the result of an irritant in the portal circulation. The bearing of this irritant upon the pathology of diabetes is as yet a matter to be determined. Some assume the condition one of general hemochromatosis and not one of diabetic origin. It is hoped that the complete study of the case now in charge of the staff of Johns Hopkins Hospital will be the means of shedding much light upon the intrinsic origin of diabetes. This will be especially timely, as the etiology of this disease has been further obscured by the renunciation on the part of recent observers of the glycogenic function of the liver.

EDITORIAL NOTES

Universal Appendectomy.

Fifty thousand deaths take place annually from appendicitis in America. This fact is said to make the disease more dangerous to public health than variola or spinal meningitis. A writer in the *Medical Record* considers the high mortality of appendicitis sufficient justification for recommending appendectomy on all children before school age. The technique, he says, is easy in a healthy body. Union by first intention is always obtained under aseptic precaution, and it is not more cruel than compulsory vaccination. Positive immunity could in this way be secured. It is further suggested that if the operation be habitually performed in five or six generations children will be born without an appendix. Several hundred years of circumcision has, however, failed to evolve any preputial parsimony, and why should 150 years of appendectomy be more successful in removing this other rudimentary organ.

The Gallinger Vivisection Bill.

Inasmuch as reason and argument are inevitably pushed aside when the sentimental legislator is out for an innings it behooves physicians to be on the alert and prevent the passage of the Gallinger bill in the United States Senate. This bill seeks to impose restrictions upon animal experiment, which can only produce disastrous results. Antitoxin is not the final word in medicine. We need a serum for cancer, tuberculosis, and many other diseases. These can only be discovered by experiment, and science must not allow her beneficent efforts to be frustrated by a band of sentimentalists whose humanitarianism is subservient to a ridiculous zoophilism. Write to your senator at once, and prevent, if possible, the passage of this measure.

Abnormal Lacteal Secretion.

A writer in the *Medical Press* has collected a large number of items on the subject of abnormal lacteal secretion. He refers to interesting cases of lactation in the virgin and in non-pregnant females of advanced age. Several examples of lactation in the male sex are recorded. Allusion is also made to the common occurrence of lactation in new-born children. It is a practice, which prevails in many parts of this country, for nurses to attempt to extract milk from the nipples of the new-born as a matter of ordinary routine. Several cases of inflammation and abscess in the heart of the new-born have been attributed to this cause.

ITEMS AND NOTES.

THE present football season is responsible for eleven deaths.

THE town of Mankato, Minnesota, has a new hospital which cost $50,000.

ON account of poor health Professor Bose, of Giessen, has resigned the chair of surgery.

LAST year Munich made 179 candidates licensed physicians, Würzburg 139, and Erlangen 59.

DR. YERSIN has been sent by the Hindoo-Chinese government to Java on a special scientific mission.

PROFESSOR RAYMOND, chief of the Charcot Clinique at Salpêtrière, has been granted a year's vacation to recuperate his health.

THE osteopaths of Kentucky, by a recent decision of the Supreme Court of that State, have been denied the right to practice.

THE United States Marine Hospital of Chicago is approaching its fiftieth anniversary, and a fitting celebration will soon be held.

IT is proposed to hold a medical congress in Cuba under the auspices of the Sociedad de Estudios Clínicos of Havana.

OWING to the efforts of Professor Guyon, of Paris, a section of urinary surgery in the coming international congress will be held.

A NATIONAL Jewish home for consumptives was opened and formally dedicated at Denver, Col., on Sunday, December 10, 1899.

IT is announced that an international antituberculosis congress is being organized, to convene at Naples next spring, with Baccelli for president.

THE second annual meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held in Charleston, S. C., February 20, 1900.

IT is reported that Mrs. J. Karl, of Mobile, Alabama, gave birth to six male children December 8, 1899. Mother and children are reported as doing well.

MCGILL UNIVERSITY has suffered a great loss in the death of its emeritus principal, Sir William Dawson, at the advanced age of seventy-four.

THE "National Society for the Preservation of the Health of the People" is the recipient of the entire fortune of Dr. Archangelski, of St. Petersburg.

DR. VITAL BRAZIL, a prominent bacteriologist of San Paolo, has been stricken with the plague while attending patients at the isolation hospital at Santos.

THE 500th anniversary of the Vienna Medical Doctorencollegium was celebrated December 10 with a banquet, medals, and a jubilee sketch of its history.

THE British Medical Society recently gave a reception to the American nurses who are to accompany the hospital ship *Maine* when she sails for South Africa.

A PARTY of medical students left Edinburgh recently to go out to South Africa under the leadership of Dr. Nethling to act as an ambulance party in aid of the Boers.

A SUIT for divorce has recently been brought by an Omaha (Nebraska) woman, on the ground that her husband insisted on treating their child by Christian science.

THE chief of the Boer military medical department is Dr. M. Reinhart, a German and graduate of Munich, author of numerous contributions to the German medical press.

THE Philadelphia Board of Health by recent orders stated that all vessels from Santos, Brazil, must be held in quarantine on account of the existence of plague in that part.

DR. CHARLES F. H. WILLGOHS, the oldest physician in Ohio, has lately celebrated his ninety-sixth birthday. He is said to be in good health and to be still in active practice.

THE director of the Military Academy of Medicine and Surgery at St. Petersburg has been authorized to admit female physicians in the hospitals for diseases of women and children.

SIR WILLIAM MACDONALD has announced his intention of founding a second chair of geology in McGill University, to be known as the "Dawson Chair," and has endowed it with $62,000.

A MILLION dollars has been given by a wealthy Bombay (India) man for the establishment of a university in that city. The university will be named the Indian University of Research.

Prof. Felix Victor Birch-Hirschfeld, who has long filled the chair of general pathology and pathological anatomy at the University of Leipsic, died November 20, at the age of fifty-seven years.

The President has promoted Gen. Leonard Wood to be major-general of volunteers, and he now outranks, it is said, all the United States officers in Cuba with the exception of General Brooke.

According to the report of *The Lancet's* special commission to investigate the composition of cigarettes, there is no ground for the charge that phosphorus, opium, arsenic, or mercury is used in making them.

The new sewage farms around Paris have contaminated wells in the district, and the residents are clamoring for damages and reparation in the shape of a pure water-supply to be installed at the city's expense.

According to the *St. Petersburg Med. Woch.*, 9200 rubles has been appropriated by the government to defray the expense of publishing and forwarding the report of the Moscow International Medical Congress.

The committee of award for this year for the Nicholas Senn prize for the best essay on some surgical subject consists of Drs. W. L. Rodman of Philadelphia, A. J. Ochner of Chicago, and H. Horace Grant of Louisville.

Dr. Kischewski, the professor of the chair of pathologic anatomy at Moscow, has been sent by the officials of the university to study the museums and institutes of his specialty in the large cities of Europe for a year.

The vaccine institute of Brazil has been enlarged by the authorities for the production of the antiplague serum, and Dr. P. Alphonso has been sent to Europe to study the best methods of the preparation and commence work in three months.

Dr. John Preston Sutherland, the registrar, has been elected Dean of the Faculty of the Boston University Medical School to succeed the late Dr. I. Tisdale Talbot, who held the office of Dean for twenty-seven years—since the foundation of the school.

The Queen has given a union jack to the hospital ship *Maine* as an evidence of her gratification at the work of the American women who raised the funds for fitting out that vessel. On December 16 the Duke of Connaught presented the flag on behalf of her majesty.

THE Pasteur Institute has declined a request from the Boers to send them a supply of antiplague serum, giving as a reason for this refusal that there was not enough serum in Paris to control an epidemic of the plague should it gain a footing in the city.

AT the next meeting of the *British Medical Association*, commencing July 31, 1900, Dr. Pye-Smith will deliver the address in medicine, Mr. Frederick Treves that in surgery, and Dr. W. J. Smyly, at one time master of the Rotunda Hospitals, Dublin, that in obstetric medicine.

SOME of the Belgian medical journals have entered on a campaign to limit the professional activity of professors in medical colleges to the education of medical generations, laboratory and research work, and leave patients and practice to the general practitioners. *A nous practiciens, la clientele*, is their watchword.

PROFESSOR TERRIER, of Paris, leaves the Hôpital Bichat this year, as his term of hospital service expires (1883–1899), and assumes charge of the important surgical clinic at the Pitié, vacated by Berger, who has recently been appointed professor of operative medicine. A souvenir medal was presented to Terrier as he took leave by his students at Bichat.

M. OSIRIS, a wealthy Parisian, noted for his charities and public spirit, has presented to the Institute of France a sum representing an annual income of 32,000 francs for a triennial prize of 100,000 francs for the most remarkable work or discovery of general interest, especially in the fields of surgery and medicine, in exhibition years. The prize is open to all countries.

IT is reported that the Italian prime minister has promised a deputation of native physicians that he will introduce in the session of parliament, which has just begun, a bill to prohibit practice, even among their own countrymen, by medical men who do not hold Italian degrees, unless the country of their qualification concedes reciprocal rights of practice to Italian graduates.

ACCORDING to the annual report of the Craig Colony, recently submitted to the New York State Board of Charities, 95 new patients, 40 men and 55 women, were admitted during the past year, and 35 were discharged. The death-rate for the year was the lowest in the history of the colony. Since its opening on February 1, 1896, 504 epileptics have been received at the colony, of whom 378 remain. When the new buildings now in course of construction are completed the capacity of the colony will be increased to a total of 720 beds.

NEW PUBLICATIONS.

REFRACTION AND HOW TO REFRACT.

The student will find this book of material aid to him in the study of this important branch of ophthalmology. Its simplicity of language and definite statements make it most attractive reading. The author has succeeded in presenting a work that is systematic and practical, so that the reader, starting with the consideration of rays of light, is gradually brought to a full understanding of optics; and following this, he is taught the standard eye, and then is given a description of ametropic eyes, with a differential diagnosis of each, until finally he is told how to place lenses in front of ametropic eyes to make them equal to the standard condition.

Refraction and How to Refract. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-glasses, etc. By James Thorington, A.M., M.D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Surgeon at Wills' Eye Hospital; Associate Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia; Member of the American Medical Association; Ophthalmologist to the Elwyn and the Vineland Training Schools for Feeble-minded Children; Resident Physician and Surgeon Panama Railroad Co. at Colon (Aspinwall), Isthmus of Panama, 1882–1889, etc. Two Hundred Illustrations, Thirteen of which are Colored. Octavo; 301 pp.; $1.50 net, cloth. Philadelphia: P. Blakiston's Sons & Co.

PARK'S BACTERIOLOGY.

In this volume the author has grouped together a sufficient number of the facts of bacteriology to constitute a text-book for the student and physician. Elaborate technique is given in its essentials to an extent necessary to make bacteriological methods plain to the physician. The subjects of infection, immunity, the nature and use of protective serums, and the diagnostic value of bacteriological cultures are particularly commented upon. Especial attention has been given to the identification of the typhoid tubercle in diphtheria bacilli, so that those not having the facilities of an abundant laboratory may be able to make these diagnoses satisfactorily. The work will be found especially useful to the health officer. It is abundantly illustrated and handsomely bound. The volume contains a novel and useful index of diseases and the bacteria found in them.

Bacteriology in Medicine and Surgery. A Practical Manual for Physicians, Health Officers, and Students. By William H. Park, M.D., Associate Professor of Bacteriology and Hygiene in the University of Bellevue Hospital Medical College, New York. In One 12mo Volume of 688 pages, with 87 Illustrations in Black and Colors, and two Full-page Colored Plates. Just ready. Cloth, $3.00 net.

OPERATIVE SURGERY.

Professor Bryant's work on surgery is already so well known that it requires no introduction to the medical public. The present is the third edition of his admirable work. The general policy of the work in previous editions is maintained in the present one. Special effort has been made by the author to eliminate illustrations having a purely commercial bearing. The work is excellently illustrated by half-tone cuts. Students and practitioners will find that this volume will give them a complete and careful description of all operative procedures upon the human body, and it cannot be too highly recommended for its completeness in all the essentials of a manual of surgery.

Operative Surgery. By Joseph D. Bryant, M.D. This Volume Contains Seven Hundred and Forty-nine Illustrations, Fifty of which are Colored. New York: D. Appleton & Company, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Pseudotetanus Due to Inflammation of the Meatus Auditorius Externus Cured by Cocaine and Dry Fomentations.

M. A. Rassoia (*Indian Medical Record*, Nov. 15, 1899) relates being called to see a young man, aged twenty-three, lying unconscious with his jaws clenched and frothing at the mouth, but his extremities, which were cold, offered no resistance to manipulation, and his pupils were normal. Temperature 90° F., pulse 90, and respirations 20 per minute. He had attended hospital a day or two before for pain in the left ear accompanied with fever, and got better. This evening, however, on returning from work at 7 P.M., he complained of pain in the ear and went to bed, but half an hour later was found unconscious.

Galvanism and smelling-salts doing no good, a stream of cold water was directed on his head, and this made him breathe hurriedly and open his jaws, but failed to rouse him to answer questions, however loudly put to him. It was found that the external meatus was so blocked up by inflammation that only a very little hole was left. He was removed to hospital at 9.50 P.M., and within two minutes after a ten-per-cent solution of cocaine hydrochlorate was dropped into the affected ear, when he showed signs of returning consciousness. The ear was then fomented with a hot brick wrapped in flannel, and five minutes afterward the man sat up and began to talk, but on being questioned about the last three hours he declared that he remembered nothing except that after the pain in the ear started he felt a little giddy, and then everything became a perfect blank. Fomentations were continued throughout the night, and after dropping glycerin and tincture of opium into his ear and plugging it with cotton, the man was discharged from hospital the next morning.

New Method of Resecting the Elbow-joint.

Cavazzani (*Centralblatt für Chirurgie*, Oct. 21, 1899) divides his operation into four stages: (1) The external incision starts outside the tendon of the biceps, two centimeters below the epicondyle, and is carried transversely outward, parallel to the interarticular line; it then runs obliquely from behind forward to end at the inner border of the ulna, near the tip of the olecranon. (2) The epicondyle is now laid bare. Over the groove of the latter the aponeu-

rosis is separated by the knife at the space between the site of the collum radii to a point above the epicondyle. The muscles which arise from the latter are pushed inward and their origins separated subperiosteally from the humerus. The capsule of the joint is now exposed as far as the coronoid process. The anconeus muscle is now separated or divided transversely, in order that the epicondyle shall be entirely separated from the muscles of the forearm. Thereby the joint capsule is exposed as far as the olecranon. (3) The tendon of the triceps is now partly separated from the ulna in connection with the periosteum, but only in its external portion; so that the radial half of the olecranon and its apex are laid bare. Only half the tendon is divided. (4) The joint is opened. The ligaments and capsule are divided in the joint line; all other attachments are severed from the coronoid process to the apex of the olecranon. The upper and forearms are then wrenched apart by an exaggerated adduction movement. This manipulation does not injure the vessels or nerves.

After resection is performed, the forearm is restored to its place by reversing the former movement, and the ligaments, muscles, and skin are all sutured.

Surgical Hints.

The December issue of the *International Journal of Surgery* contains the following hints:

In phlegmonous conditions affecting the hand or forearm, long-continued baths in mild antiseptic solutions are of great usefulness. The ordinary elongated fish-boiler is very convenient for this purpose, as the whole hand and forearm may be placed in it, and allowed to remain in it for hours at a time.

When searching for a pistol or rifle bullet it is of the utmost importance to find out the exact position of the patient when he was shot, and the direction from which the missile came.

In making plaster-of-Paris bandages, or in using those that are ready-made, see if the plaster appears to be damp. If so it will not set well, but may be greatly improved by placing it in the kitchen oven for a short time.

In children, a pain occurring symmetrically about both shoulders should lead the surgeon to examine for cervical caries. In rheumatism the pain is of a very different character, and practically never affects both sides so evenly.

It is well to remember that in concussion of the brain death often takes place through paralysis of the respiratory centers. In these cases the prompt use of artificial respiration may tide the patient over

his danger. If the heart centers appear to be involved we must stimulate, and for this purpose there is nothing better than heat applied to the precordial region, together with such drugs as nitrite of amyl, nitroglycerin, strychnine, ammonia, etc. Alcohol and strong coffee may be administered in enemata.

On the Surgical Treatment of Hemorrhage from Gastric Ulcers.

Eisendrath and Andrews (*Annals of Surgery*, October, 1899) report two successful cases, and this with much experimental work bring them to the following conclusions:

1. The result of the practice of the best modern surgeons warrants the statements, previously made on theoretical grounds, that only operative interference can save the lives of a part of the patients affected with bleeding ulcers of the stomach, viz., those not improved by internal medicine.

2. Surgical intervention is to be recommended, first, in small, repeated hemorrhages; secondly, in severe ones, occurring more than once, especially if more than 500 cubic centimeters is lost at each hemostasis.

3. A single copious hemorrhage is not necessarily an indication for operation.

4 In ulcers at or near the pylorus, pyloroplasty (Heineke-Mikulicz) is ideal. It makes local treatment possible, and gives all of the benefits of gastroenterostomy, and is safer.

5. Cauterization and curetting of the ulcer should give place to resection whenever the stomach wall can be reached from without.

6. If adherent posteriorly and at the end of the stomach, cauterization, curettage, and ligature *en masse* are the best substitutes for excision.

7. Ligature *en masse* is shown by their experiments to endanger perforation except when supported by external sutures.

MEDICINE.

Experimental and Clinical Investigations on Urotropin.

N. Nicolaier (*Zeitschrift für Klinische Medicin*, vol. xxxviii, Nos. 4, 5, and 6, 1899) says, in regard to the action of this drug in the uric acid diathesis, that he has proved that urotropin has solvent properties at the body temperature; it occasionally diminishes the uric acid secretion, as Rosenfeld has shown, and as at least one case of arthritis urica demonstrates; and it is a diuretic. Hence its use is

certainly indicated in the treatment of uric acid calculi. And since it is found unchanged in the urine, it must be present in the blood and tissue fluids; therefore it is certainly rational to employ it in gout.

The records of its employment in calculous disease are yet few, compared to those of its use in diseases of the urinary passages. This is probably on account of the shorter time required for it to develop its effect, and the greater ease of recognizing it in these latter affections. Casper is the only authority whose report to this effect is unsatisfactory. Loebisch, Levison, and Tanago report favorably upon urotropin in this respect.

The writer has treated a number of patients suffering from the uric acid diathesis with urotropin, and has watched them for a considerable time — in two cases for over three years. One fact was certainly obvious, and that was that the urotropinized urine at the body temperature had uric acid solvent properties, which the ordinary secretion did not possess. Thus if there was any doubt as to the solution of concrements already formed, their growth and the formation of new ones was certainly prevented.

Diuresis was increased in only a minority of cases; this was remedied by the abundant administration of water, more especially of the mild alkaline mineral springs. Under the use of urotropin, concrements of fair size were several times evacuated with ease; but whether the drug has any marked action upon the nephritic colic itself the writer is unable to say.

Koch on Blackwater Fever (Hemoglobinuria).

When Koch (*Indian Medical Record*, Nov. 15, 1899) was pursuing his studies on malaria in East Africa, he was unacquainted with the literature of the subject, yet he independently came to the conclusion that blackwater fever was not a special form of malaria, but an intoxication process. From his investigations he draws the following conclusions:

1. That in blackwater fever malarial parasites are frequently absent.

2. That when they are present their number bears no definite proportion to the hemoglobinuria, as is the case in the analogous Texas fever.

3. That cases of malaria occur in which the parasites are very numerous and yet no hemoglobinuria appears.

4. That recent observations in malaria and blackwater fever show that important clinical differences exist between them.

5. That blackwater fever may be associated with two different forms of malaria, with tertian ague, and with tropical fever.

From these results it is, in the opinion of Koch, clearly proved that blackwater fever is not malaria, but a disease which may appear alone, but which is also more or less frequently associated with malaria.

A Note on Antipneumococcus Serum.

J. McFarland and C. W. Lincoln (*Journal of the American Medical Association*, Dec. 16, 1899) say that in the various septic processes caused by the pneumococcus, such as meningitis, purulent pericarditis or pleurisy, periostitis, the rare cases of diplococcus angina, the offer of a specific treatment would come as a very welcome gift.

In the few therapeutic observations that have been made by other writers varying success is reported, but enough cases have been treated to give a very hopeful outlook for the future of serum-therapy in pneumonia. The most important observations made are as follows:

De Renzi, in 1895 and 1896, studied, comparatively, thirteen cases of pneumonia treated without the serum, with three to twenty-three per cent of deaths, and fourteen cases treated with the serum, with two to fourteen per cent of deaths. In the latter series one was *in articulo mortis* when treatment was begun, and the other had renal and arterial disease apart from the pneumonia.

Cooke treated two patients, Spurnell and Fanoni one each, with antipneumococcus serum from different sources, with good effect and ultimate recovery.

Pane treated nine cases with an average of twenty cubic centimeters of antipneumococcus serum each day. All of these recovered except one, in which the treatment was begun late and an insufficient quantity of the serum administered.

Washbourne treated six patients, some of them very severe, with his serum, and had excellent results, all of his cases recovering.

Croupous Pneumonia Complicated with Hypopyon-keratitis.

Jacob Mandl (*Wiener Med. Woch.*, p. 41, 1899) reports a case of croupous pneumonia complicated with hypopyon-keratitis. Two weeks after occurrence of a typical pneumonia in a chronic inebriate, thirty-one years of age, the right cornea presented a serpiginous ulceration which, in spite of paracentesis of the anterior chamber, became complicated with iritis and hypopyon. Notwithstanding a second paracentesis, spontaneous rupture of the cornea took place, causing extensive cicatrization of the cornea and anterior synechiæ of the iris.

Bacteriological examination demonstrated the existence of Frankel's diplococci both in the corneal abscess and later in the pus of the hypopyon. Mandl believes pneumococci to be present in almost every case of serpiginous ulceration of the cornea, and that infection generally takes place from the conjunctiva. One may often discover virulent pneumococci in the conjunctival sac of healthy people. The author believes, however, that in this case the corneal abscess was produced in a metastatic manner by transmission of infectious material by way of the sanguine and lymphatic capillaries.

Albuminuria in Diphtheria.

According to Joubert (Thèse de Paris, 1898–99) albuminuria in this disease has become lessened since the introduction of the serum treatment. Thanks to this method of treatment there is not the same percentage of albumin in the beginning of the disease, and it has not, therefore, the same bad prognostic meaning as formerly. The serum has no bad effect upon the kidneys. In albuminuria the use of the diphtheritic serum is not contraindicated; on the contrary it seems to influence the disease favorably.

Chlorosis Due to a Decrease in the Hemoglobin.

Riva (*Clinica Medica Italiana*, No. 5, 1899) ascribes chlorosis to a decrease in the hemoglobin of the red blood-corpuscles brought about by a weakening of that biochemical property of the blood cells which leads to the combination of iron and albumin, thus giving hemoglobin. This view accounts for the efficiency of inorganic mineral preparations and for the frequent failure of organic preparations, traceable either to the limited amount of iron they contain or to the stability of such albuminates of iron.

Choreiform Spasms after Chicken pox.

Menko, of Amsterdam (*Deutsche Med. Woch.*, No. 45, 1899), reports that according to recent experience varicella does not seem to be the unimportant children's disease which it was heretofore thought to be, at least in view of the possible complications and sequelæ, among which he numbers cases of larvated chorea minor which have been observed of late.

Trichinosis.

G. Blumer and L. Neuman (*American Journal of the Medical Sciences*, Dec., 1899), in an article on this subject, conclude by saying

that in some epidemics of trichinosis one or more of the most characteristic symptoms may be lacking in the majority of the patients. In these cases the examination of the blood is of the greatest value, as pathognomonic changes are found in it, consisting in (*a*) an eosinophile leucocytosis, (*b*) a relative decrease in the neutrophiles, and (*c*) in many, but not all, cases a decrease in the small mononuclear leucocytes early in the disease.

THERAPEUTICS.

Indications for Balsamics in Gonorrhea

In a recent clinic at the Hospital St. Louis (*Journal of the American Medical Association*, Dec. 23, 1899) Professor Fournier said that balsamics, to be followed by good results in gonorrhea, must be administered according to certain definite rules.

1. As an abortive treatment the employment of balsamics is always attended with failure.

2. The treatment of gleet, morning drop, by balsamics is equally unsuccessful.

3. Balsamics are not indicated during the acute inflammatory stage of acute urethritis, and if they are administered in this stage one of two conditions may result: either there remains a light discharge consisting of a few drops during the day, or there remains the morning drop. But now, if their administration be discontinued, the discharge reappears with its former abundance. The untimely employment of balsamics is the cause of eighty per cent of blennorrhea or gleet.

4. Balsamics should not be employed before the end of the first month of the disease. At about this time the discharge is three-fourths lessened, has lost its greenish tinge, and is light yellowish. The timely administration of balsamics is followed in the great majority of cases by recovery. The inflammatory period, however, must be over. There must be absence of pain on urination, absence of chordee, and diminution of the discharge, which must be yellowish and ropy.

5. Balsamics must be given in large doses—a mixture of ten grammes (2½ drachms) of cubebs and three grammes (47 grains) of copaiba is usually successful. Sandalwood and other preparations give equally good results. It is important to begin with large doses, and continue them for ten or twelve days, then gradually diminish the dose, for a sudden stoppage of the medicament would be followed by a return of the discharge.

6. The drug must be given thrice daily during the entire treat-

ment. The amount of fluids ingested should be limited to avoid too great dilution of the balsamic eliminated.

7. There is no advantage in alternating the balsamics. The one that has been selected is to be continued. If at the end of ten days the discharge is not almost completely checked, discontinue the remedy for from eight to ten days. At the end of that time give it another trial.

Sodium Salicylate in the Treatment of Some Diseases of the Liver.

Dalche and Coyon (*Bulletin Gén. de Thér.*, October and November, 1899) ascribe to Blanchier the discovery that salicylate of sodium increases the flow of bile and that the salt is present in the secretion. Rutherford, however, made a most exhaustive study of its cholagogue efficiency, and Levaschero, Prevost, and Binet reported similar findings. Sodium salicylate seems to act both on the nervous system and on the liver cells, and the cholagogue influence appears supplemented by an antiseptic action of the drug.

Sodium salicylate may therefore be of considerable therapeutic value in the treatment of liver diseases, the only point being to insure adequate elimination through the kidneys. Its indications are to be met along the line of hepatic congestion, catarrhal jaundice, and lithiasis uncomplicated with infectious symptoms. It appears contraindicated, however, in cases with large calculi, and in such patients who suffer from hepatic degeneration.

The medicine should be exhibited during the intervals between and not during attacks of gall-stone colic. Chauffard associates it with benzoate of sodium, as follows:

Sodium benzoate (from benzoin)..... 10 grammes.
Sodium salicylate..... 20 grammes.

Divide in 30 cachets (konseals). S.: One t. i. d., and later add one at a time after meals.

To this may be added a dose of one-per-cent infusion of boldo leaves. Sodium salicylate is beneficial in catarrhal jaundice, but should not be used in the malignant forms.

Treatment of Cancer by its Own Toxins.

P. J. McCourt (*Medical Review of Reviews*, Nov. 25, 1899), in an article on this subject, advocates the use of the cancer toxins in the treatment of cancer. He says that for the primary serum he selects a typical case of undoubted recurrent carcinoma, otherwise in good health and free from obvious complications. The ulcerated surface

is cleaned and washed without the use of antiseptics. Sterilized dressings are applied to the part for at least forty-eight hours, and the virus is then collected by curetting the surface with a sharp spoon curette at the point of discharge. The detritus and a portion of the cancer juice thus collected are added to a known weight of purest vegetable glycerin, again weighed, and thoroughly triturated in a new and clean glass mortar. From this triturate the clear serum is obtained by means of a separator specially devised for the purpose. The various degrees of attenuation required for individual as well as general use are obtained by successive triturations with pure vegetable glycerin. In the sixth triturate after separation microorganisms are not found, but that triturate is highly toxic and unfit for use; hence the active agent in the antitoxin when reduced to medicinal strength is not culture germs, but attenuated carcinoma ptomaines or alkaloids. By repeated subdivision and attenuation the toxins become antitoxins. Distinct serums are thus prepared from epithelioma of various parts, from adeno-carcinoma, and also from the different forms of carcinoma, especially the more malignant. Dosage varies with the stage of the disease and with the constitution and tolerance of the patient. Of the attenuation selected for a given case, the dose is about five minims in water, administered when the stomach is empty, thrice, twice, or once daily for a week or a month. So soon as improvement is observed, or when critical or toxic symptoms supervene, the intervals between doses should be lengthened and a much weaker solution substituted. A strict régime and absolute abstinence must be enjoined. Should the patient drink even a single glassful of beer, he is likely to neutralize the treatment for an entire month. The writer says that so far the results obtained from this treatment of cancer have been encouraging, but he makes no promises, and hopes that the profession will give it a thorough test.

Iodine and its Combinations.

Heintz (*Medical Press and Circular*, Dec. 6, 1899) says that his investigations into the behavior of iodoso-benzoic acid and on the influence of the iodine alkalies on absorption are of special interest. Iodoso-benzoic acid, discovered by V. Meyer, possesses the property when applied locally of splitting off free iodine in contact with iodine-alkali circulating in the blood. If, for example, iodoso-benzoic acid mixed with starch is injected under the skin of the rabbit, and an injection of an iodine solution is made into the blood-current, the starch is colored blue by nascent iodine. By the local application of iodoso-benzoic acid therefore, and the simultaneous administration

of iodine per os, we have the means of exciting a lasting action of iodine at the place of selection, but the iodoso-benzoic acid acts as a powerful irritant. The author attributes the resorptive properties of iodine to its influence on the leucocytes. Great proof of this hypothesis has hitherto not been at hand; the leucocytosis that follows the introduction of iodine also follows the introduction of indifferent salts. It might be supposed that the iodine alkali in the blood or tissues was split up in the region of greatest tissue change, therefore in the leucocytes; the free iodine then acts back on the leucocytes and excites them to greater resorptive activity.

Urotropin.

G. Ehrmann (*Wiener Med. Presse*, No. 25, 1899; *Deutsche Med. Woch.*, No. 25, 1899) records his experience with urotropin in the management of infectious diseases of the urinary organs. He reports very beneficial results from the use of urotropin in catarrhal cystitis with ammoniacal decomposition of the urine, but questions its efficiency in cases of bacteriuria. He recalls, however, the differing views held by various authorities, some of which designate by the name of bacteriuria the occurrence in the urine of bacterium coli without concomitant inflammatory symptoms, while others speak of bacteriuria when the urinary sediment contains isolated pus corpuscles with a predominance of bacteria. Several authorities—among them Heubner—failed to derive lasting results from the exhibition of urotropin in cases of bacteriuria with acid reaction of the urine. No more did urotropin prove successful with most observers in the management of chronic posterior urethritis or chronic cystitis of gonorrheal origin; while Ehrmann on the contrary reports none but favorable results. He also records successful returns from the exhibition of urotropin in the cystitis of typhus, also in a case of urinary tuberculosis and in two cases of prostatic hypertrophy.

The Treatment of Pneumonia as Based upon Certain Views as to its Pathology.

Andrew H. Smith (*Medical News*, Dec. 16, 1899) says that in his opinion it is the duty of the family physician to provide his families with either creosotol or one of the salicylates, and to instruct them that with the slightest chilly sensation or the slightest stabbing pain in the lung a dose is to be given at once, and that this dose is to be repeated at stated intervals until the physician arrives. This might prevent the development of pneumonia in some cases and shorten the attack in others. The writer says he prefers the carbonate of creosote, and that in his hands it has done good service. As to accessory treatment Dr.

Smith says it comprises: First, stimulation of the emunctories to carry off the poison as it forms; secondly, sustaining the vital powers, and particularly the heart—cardiac stimulants, hydrotherapy; thirdly, relieving the pulmonary circulation—vasodilator venesection; fourthly, compensation for loss of respiratory service—inhalations of oxygen; fifthly, reduction of excessive temperature—cold to surface, antipyretics; sixthly, relief of incidental symptoms.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Cause of Cough in Children.

Dr. Parkinson, in the *British Medical Journal* of August 19, 1899, reports the notes of a series of 700 cases of cough in children, varying in age from six months to twelve years. Careful examination of the chest was made in all of these cases. Acute or chronic enlargement of the tonsil was found to be the cause in 170 cases, bronchitis in 143, constipation in 69, gastroenteritis in 58, decided adenoids in 58, pharyngitis in 51, worms in 30, tuberculosis of the lungs in 29, rickets in 23, whooping-cough in 23, acute pneumonia in 18, bronchopneumonia in 11, dry pleurisy in 8, laryngismus stridulus in 3, laryngitis in 2; and there were twelve mixed cases, including carious teeth, pleuritic effusions or adhesions, etc.

In a summary he says that thirty of the cases were due to disease of the thorax, forty per cent to throat disease, twenty-three per cent to disease of the gastrointestinal tract, and six per cent to other causes.

The author did not take up the subject of ear complications as a factor in producing cough, deeming the causes found to be sufficient to account for the trouble. He lays special stress on the cough due to gastrointestinal disease.

By far the larger portion of cases was due to throat conditions, especially enlarged tonsils. The percentage (eight) of cases affected by adenoid vegetations is small in comparison with the statistics of other observers. It may be pertinent to inquire if the cases of enlargement of the faucial tonsils (nearly twenty-five per cent of the total number) were not frequently complicated by enlargement of the pharyngeal tonsil. He makes note of the important fact that cough due to bronchiectasis or enlargement of the mediastinal glands closely simulates and is easily mistaken for whooping-cough. The differential diagnosis may be cleared up by getting a history of an earlier whooping-cough, by finding clubbed fingers, cyanosis, deformity or

dulness of the chest, and offensive sputum expectorated in large amounts at considerable intervals. Enlarged tuberculous glands may produce similar symptoms.

Paroxysmal Sneezing and Allied Affections.

James B. Ball (*The Lancet*, Feb. 11, 1899), in a general consideration of the subject, to a great extent founded on the personal experience of 112 cases, says that one of these patients once counted the number of sneezes, and found that she sneezed 294 times consecutively. The number of pocket-handkerchiefs used may amount to twelve or thirteen a day. Exactly one-half—*i.e.*, fifty-six—of the author's patients suffered from definite asthmatic attacks. Of the 112 patients there were fifty-nine males and fifty-three females, so that the sexes are pretty evenly divided. The majority of patients presented themselves between the ages of twenty and forty, but the disease as a rule develops in the earlier period of life, although it may begin at any age. After considering the local conditions which sometimes accompany the affection, and its general progress, he reviews the treatment by the galvanocautery, chromic acid, or surgical measures for intranasal treatment. Of internal treatment he mentions quinine, belladonna, arsenic, and iodide of potassium. He frequently employs a pill containing one grain of sulphate of quinine, one-sixteenth of a grain of iodide of arsenic, and one-twelfth of a grain of extract of belladonna, to be taken three times a day, the arsenic and belladonna to be increased according to tolerance. He also employs cocaine, menthol, and menthol camphor intranasally.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

A Case of Pigmented Patches About the Buccal Mucous Membranes.

At a meeting of the Dermatological Society of London, October 11, 1899 (*British Journal of Dermatology*, November, 1899), Dr. H. Radcliffe Crocker showed a man, aged fifty-two, with pigmented patches about the buccal mucous membranes of some four years' duration. The patches chiefly affected the lips and cheeks, where they were about the size of a split pea, and varied in hue from light sepia to black, according to their age, the darker ones apparently being the oldest. On the lower lip there were six of these patches; the upper lip was less affected. On the hard palate, in the middle

line, three millet-seed- to hemp-seed-sized pigmented spots were present, and there was also one near the junction of the palate and right alveolus. The man had been employed for some years in the pharmaceutical laboratory of wholesale druggists, but handled chiefly belladonna, hyoscyamus, and other plants. He came to University College Hospital for general pruritus of four months' duration connected with a recent attack of jaundice, due to gall-stones, which was clearing up, but the conjunctivæ were still yellow, and there was also a certain discoloration of the skin. The arteries were distinctly sclerosed. There were no symptoms of morbus Addisoni. The origin and nature of the pigmented patches could not be etiologically accounted for.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

The Relation of Migraine to Epilepsy.

W. G. Spiller (*American Journal of the Medical Sciences*, December, 1899) from his observations on this subject draws the following conclusions:

1. Attacks of migraine occur associated with nausea and vomiting; this form is known as simple migraine, and usually remains unaltered during the life of the patient.

2. In other cases visual disturbances (hemianopsia, scintillating scotoma, amaurosis, etc.) are associated with the migraine, and the disease is then known as ophthalmic migraine.

3. When paralysis of the ocular muscles occurs with the migraine, the disease is described as ophthalmoplegic migraine.

4. Migraine, especially the ophthalmic form, is related to epilepsy, and the attacks of migraine may precede for many years the convulsive attacks of epilepsy, although in most cases of migraine no convulsions are ever detected.

5. In some cases epilepsy appears in the form of one or more of the disturbances seen occasionally with migraine, and later, even after many years, convulsions develop. The disease may be epilepsy from the beginning. It matters little, with our uncertain knowledge of the pathology of the two diseases, whether we regard these as abortive cases (formes frustes) of migraine that later become associated with epilepsy, or as abortive forms of epilepsy (sensory epilepsy), in which the couvulsions later become apparent, provided we recognize a relation between some forms of migraine and epilepsy.

THE MEDICAL AGE

VOL. XVIII. DETROIT, JANUARY 25, 1900. NO. 2.

ORIGINAL CONTRIBUTIONS.

IMMEDIATE AND REMOTE EFFECTS OF NASAL OBSTRUCTION.*

BY DR. F. R. REYNOLDS, EAU CLAIRE, WIS.,

Member of American Medical Association, Wisconsin State Medical Society, Inter-County Medical Society; Anglo-American Medical Association, Vienna; Eighth International Ophthalmological Congress, Edinburgh, etc.

Although much discussion has been indulged in and a great deal has been written upon nasal stenosis, still I feel that an investigation into this subject at this time, and more discussion upon the same, will serve to draw our attention more particularly to the matter and give us a greater insight into the immediate and remote effects of this very interesting class of cases, the importance of which I fear is often underestimated. It is only of late that the nose and throat has received the amount of attention its importance demands by the physicians in general practice; and a more thorough examination than what could be ascertained from the use of the spoon and tongue depressor as diagnostic instruments was until late years seldom indulged in. The light reflector, nasal speculum, rhinoscope, laryngoscope, light condenser, and artificial illumination were at that time not employed. In those glorious days the treatment of purulent otitis media, deafness, purulent coryza, and hypertrophied faucial tonsils in children was ignominiously avoided, and the dignified assurance was given that the patients "would outgrow them."

It is gratifying to know that those days of incompetency and dereliction of duty are past, and that the physician of to-day has learned his grave responsibility for the thorough investigation, accurate diagnosis, and conscientious treatment of these affections.

The functions of the nose, aside from those of olfaction and resonation of the voice, are respiration and the regulation of aeration of the middle ear.

The respiratory function carried on through that portion of the

*Read before the Inter-County Medical Society at Chippewa Falls, Wis.

nasal chambers called the respiratory tract, viz., the inferior and middle meatuses, includes that of filtering, warming, and moistening the inspired air. The filtering of the inspired air from dust and microorganisms is accomplished partly by the hairs at the entrance of the vestibule, which intercept the coarser materials, while the cilia and moistened surface of the mucous membrane retain the finer material with which the air is continually loaded.

The warming of the inspired air is one of the most important functions of the respiratory tract. The respiratory region by reason of its anatomical arrangement, the mucous membrane being distributed over numerous folds or convolutions, with the addition of its ability to become surcharged with blood under physiological demands, renders it most admirably adapted to the performance of this office.

Perhaps the function of very greatest importance accomplished by the respiratory tract is the moistening of the inspired air.

It is now the accepted view that the turbinated bodies, by transudation of serum through the capillary vessels, with which they are so abundantly supplied, are sufficient to supply the moisture for the respiratory purposes, putting the inspiratory current in proper physiological condition to render it entirely innoxious to the air cells of the lungs. Another function greatly interfered with in nasal stenosis is that of phonation, which is of peculiar importance in giving resonance and individuality to the voice.

Since a good voice is dependent upon a full command of nasal as well as oral vibrations, it is of the utmost importance that the nasal cavity be entirely free from obstruction.

Evidence is abundant that there are many forms of diseases not obviously of nasal origin which are prevented, relieved, or cured by the successful treatment and permanent relief of nasal stenosis. Among these may be mentioned anemia, marasmus, hay-fever, asthma, and laryngismus stridulus. These diseases usually come first under the notice of the general practitioner, and he is fast learning the importance of a careful examination of the upper respiratory tract for an exciting focus for the production of these ofttimes reflex troubles.

Voltolini, who reported a case of spasmodic asthma dependent upon the existence of a nasal polypus in 1872, was undoubtedly the first to call attention to the nasal reflex. The asthma was cured by the removal of the polypus.

Seiler notices two cases of reflex cough due to hypertrophic rhinitis, and the evidence has accumulated to such an extent that besides the diseases already enumerated which have their origin in an exciting focus in the nose may be mentioned gastralgia, cardiac palpi-

tation, neuralgia of the first two branches of the trigeminus, scotoma, migraine, cephalalgia, ciliary neuralgia, vertigo, photophobia, neurasthenia, spasmodic cough, spasm of the glottis, frontal and supraorbital headache, etc.

The above diseases, when associated with nasal stenosis, are reflex manifestations of irritation to that highly sensitive nervous organization, the mucous membrane of the nose.

Folliculous pharyngitis and pharyngitis sicca often accompany nasal stenosis, as well as emphysema and bronchitis when the obstruction is of long standing. We can readily comprehend that from nasal obstruction with its natural consequence, a deterioration of its functions, the person necessarily breathing through the mouth, there may arise as a natural consequence injury to the entire respiratory tract.

The effect of inspiring air that is neither warmed nor moistened, as well as being filled with particles of dust and microorganisms where there is a complete obstruction, is much increased in the upper respiratory tract, where there is only partial obstruction to the nares. As a consequence of partial obstruction we have air rarefaction, with an increase in speed of the air current; these together producing an appreciable increase in the supply of blood to the membrane. This increase in the blood-supply causes dilatation of the capillaries with a weakening of their coats, producing a state of passive congestion and chronic inflammation, increase in nutrition, and as a consequent result, hypertrophy of the tissues in the nasal chamber. From the nares the inflammation will naturally continue to follow downward, involving the pharynx, larynx, trachea, and bronchi.

Nasal stenosis may be partial or complete. Partial stenosis may also be divided into two varieties, the temporary and the permanent. Temporary nasal stenosis may arise as a result of an irritation and consequent congestion of the mucous membrane from the inhalation of irritating gases, an atmosphere loaded with dust, or from the presence of a foreign body. The turbinated bodies are exceedingly likely to swell under such irritation, by reason of the erectile tissue which composes a large proportion of their submucous structure. Temporary stenosis is recognized partly by the history of the case, but more particularly by its action and appearance under manipulation and the influence of cocaine. If pressed upon by a probe it dimples very easily, and if a solution of cocaine is sprayed into the nostril it will shrink to a wonderful degree. This temporary stenosis and the condition accompanying it are exceedingly liable to have a deleterious influence on both eyes and ears, but these effects generally pass away with the subsidence of the attack.

In permanent stenosis, which is usually the consequence of hyper-

trophies of the turbinated bodies, anterior and posterior, distortions, deviations, malformations, neoplastic growths of the septum, either malignant or benign, congenital or acquired, rhinoliths, polypi, hypertrophy of the pharyngeal and faucial tonsils, syphilis, and rickets, the symptoms vary as the obstruction is more or less complete.

In partial stenosis, where one or both nostrils admit of a forced inspiration, we have a variety of conditions that are obvious from the nature of the affection.

The air rarefaction produced by breathing through a nostril partly closed is responsible for a large percentage of the cases of middle-ear catarrh which we are called upon to treat.

In order that the organ of hearing may be capable of properly performing its functions there must be equable pressure of air on both sides of the membrana tympani, consequently the air within the middle-ear cavity requires constant renewing to prevent the lowering of the pressure within the tympanic chamber. This renewal of air is carried on through the Eustachian tubes during the process of respiration through the nose. Now, then, if a condition of nasal obstruction exists, and a consequent diminution in the volume of air passing into the nasopharynx, the pressure within that space will be diminished.

This condition of air rarefaction within the nasopharynx being long continued will cause a hyperemic condition of the vault of the pharynx and Eustachian tubes which will present further obstruction to the air-pressure in the middle-ear cavity, and in consequence of this diminution of air-pressure there will be a retraction of the membrana tympani, and a chronic catarrhal inflammation of the middle ear will be generated, with its attendant symptoms of deafness, tinnitus aurium, etc.

It is to be understood, however, that there are other ways by which an affection of the middle ear may be brought about when nasal stenosis is not an existing condition, viz., by direct extension from the nasopharynx because of contiguity of tissue, and by obstruction of the Eustachian tube by hypertrophy of its lining membrane; or more rarely, direct obstruction at the pharyngeal orifice, by hypertrophy of the pharyngeal tonsil or through the presence of other postnasal growths. Conjunctivitis and dacryocystitis are also frequent accompaniments of nasal stenosis.

In complete stenosis, when there is mouth-breathing only, we have besides disease of the ears, nasal voice, snoring and dyspnea at night, often impairment of smell and taste, the different forms of pharyngitis, laryngitis, laryngismus stridulus, asthmatic attacks, and other affections of the larynx and bronchi. There will generally be considerable

hawking and coughing from the accumulation of catarrhal secretions; often great impairment of general health from imperfect oxygenation of the blood. This is especially true of children, as witness the weak, debilitated condition of those suffering from adenoid vegetations in the vault of the pharynx.

It is beyond the scope of this paper to discuss the etiology of the various forms of nasal obstruction. In the treatment of the ear affections that accompany the various conditions of nasal stenosis the results of removing the obstruction have been so apparent, and by all operators conceded to be so beneficial, that they warrant me in stating that in all cases of middle-ear trouble complicated with nasal obstruction and catarrhal diseases of the nose and throat the neglect of intranasal or postnasal treatment is positively criminal.

In the treatment of the various forms of disease occurring in connection with nasal obstruction, the removal of the cause is the first principle; this object is attained almost entirely through surgical processes. The surgical precedures for the relief of nasal stenosis may be grouped as follows:

1. For the reduction of hypertrophic condition of the turbinated bodies the methods employed are: (*a*) Reduction by use of chemical caustics, which may be accomplished by the use of chromic or glacial acetic acid, nitrate of silver, nitric acid, or London paste; (*b*) reduction by the electric or galvanocautery; (*c*) portions of the hypertrophied tissues may be removed by the electric or cold wire snare. The latter, a very favorite method employed in the hospitals of Vienna while I was studying in those institutions, does not meet my entire approval, except in the case of posterior hypertrophies, because of the too great destruction of mucous membrane.

2. Polypi and other intranasal and postnasal tumors are best removed by the cold wire or galvanocautery snare.

3. Malformations and deviations of the septum may be corrected by a number of methods, viz.: (*a*) The forcing of the deviated septum into proper positions by forceps, after fracturing the same or after cutting through with one of the different varieties of the septal punch; after which suitable clamps are to be worn to keep the parts in position till thoroughly healed. (*b*) The removal of small spurs and ridges with galvanocautery, electrolysis, or chemical caustics; but of this method I am not in favor, by reason of its liability to produce necrosis with its consequent disastrous results. (*c*) The removal of prominences of considerable extent may be accomplished by means of the saw, knife, chisel, gouge, burrs, trephines, etc. (*d*) By Dr. J. B. Roberts's method, which is accomplished by making an incision along the prominent line of deflection, and after forcing the parts into

proper position fixing the same by the insertion of long pins embedded in the septal tissues.

For my part I have found the saw and gouge, or trephine run by the electric motor, the most convenient and useful for the removal of these prominent portions of the septum, the saw being employed in my practice more than any other instrument.

The results of these surgical procedures have been most gratifying. The satisfaction obtained by the patient of breathing through luxuriously free nasal passages, the removal of the cause for the invariably persistent and annoying nasal catarrh, as well as the barriers to the proper application of effectual remedies for the removal of these distressing discharges, so that we are enabled to thoroughly cure them, relieve us of the necessity of canting, as of old, that "chronic catarrh is an incurable disease that must be allowed to run its course, and cannot be stopped in its ravages upon the systems of its victims"—that it must go on gradually undermining the constitution, destroying the organs of special sense, cutting us off from social pleasures, and rendering us unfit to fully enjoy the life we so dearly love.

I would not lead you to understand that every projection of the septum should be removed, nor that every deviated septum should be straightened, but only when the condition is such that the nose is unable to properly perform its functions of respiration, and an insufficient amount of air is being carried to the lungs.

Hypertrophied faucial tonsils in children should be removed with the tonsillotome, but in adults, on account of danger from hemorrhage, the cold wire or galvanocautery snare should be employed.

I have also in many cases used galvanocautery puncture for the reduction of tonsils of a moderate degree of hypertrophy, and in like manner galvanocautery dissection.

Adenoid vegetations in the vault of the pharynx may be removed by the postnasal cutting forceps, or the sharp cutting postnasal curette. A general anesthetic in the operations enumerated is not often necessary, a four- to ten-per-cent solution of cocaine being usually sufficient.

While it is certain that nasal obstruction is an important factor in the production of many of the diseases mentioned in this paper, I wish you to clearly understand that I by no means exclude other causes. I think that in most cases of reflex troubles from nasal stenosis there is generally a neurotic element present without which the nasal stenosis would not exert nearly as important an influence in their causation. Without attempting to exhaust this subject, I have endeavored to bring it sufficiently forcibly to your notice to empha-

size its importance to the general practitioner in many of the diseases which he is called upon to treat.

The following cases selected from my case-book will serve to illustrate the three forms of nasal obstruction:

Case 1.—Edw. F——, aged twenty-eight, merchant. History given was as follows: At the age of sixteen years the nose was injured by a blow from a heavy piece of wood, and since that time he has not been able to breathe through the right nostril, and only to a slight degree through the left. He had a dry, hacking cough, and was often awakened at night by attacks of dyspnea. He had frequent attacks of frontal and supraorbital headache, especially after being subjected to exposure; there was also considerable conjunctivitis. Upon inspection the following conditions were found to exist: Nose turned to the left. A large exostosis filled the right nostril, causing nasal bone to bulge on that side. There was a deep concavity of the septum on the left side, and this was nearly filled by the inferior turbinated body, which was greatly hypertrophied. Patient was somewhat weak and anemic, and became easily fatigued upon exertion of any kind. Pharyngitis and injection of the mucous membrane within the larynx also present. After thoroughly anesthetizing the parts with cocaine, the exostosis was removed by means of a Bosworth angular saw. Proper treatment for the pharyngitis was instituted, and the hypertrophy was reduced by means of the galvanocautery. After a few weeks' treatment the symptoms were all greatly improved, this improvement continuing, until now at the end of six months the patient considers himself entirely well.

Case 2.—Earl B——, aged six years. Sleeps with the mouth open. He talked in a muffled tone of voice. Was subject to nightmare, often awakening with a start and crying out. Deglutition sometimes interfered with. Had a dry cough, mostly at night; this, together with considerable impairment of the general health and loss of appetite, greatly alarmed the parents. Was brought to me to ascertain if there was "consumption of the throat," which had been suggested. Upon examination of the throat the faucial tonsils were found to be greatly enlarged, filling the pharyngeal space to such an extent that they came in contact, projecting somewhat into the nasopharyngeal cavity. Moderate amount of hypertrophy also present. Removal of the tonsils by the tonsillotome (Aubrey's) was followed by a marked improvement in all untoward symptoms. The hypertrophy of the turbinates readily succumbed to spray and medicaments. Two months after the treatment was first instituted the little fellow slept well at night, breathing easily through the mouth; cough entirely disappeared; appetite and general condition most excellent.

Case 3.—Edith G——, seven years of age. Had always been somewhat deficient in mental capacity. Breathed constantly through the mouth at night, and much of the time during the day. Had noisy, rattling breathing at night, with restless and troubled sleep. The lower jaw was dropped, and the face had a stupid, vacant appearance. Was very hard of hearing, and had a discharge from right ear for three years, dating back to an attack of scarlet fever. An examination of the vault of the pharynx with the index-finger discovered a large flabby mass occupying nearly the entire nasopharyngeal space, which bled easily. Examination of right ear revealed the drum membrane almost entirely destroyed, and polypi and granulations filled the middle-ear cavity, left ear; membrana tympani retracted and somewhat opaque; tinnitus aurium present. Under ether anesthesia the adenoid vegetations were removed by cutting forceps and the postnasal curette; the polypi and granulations in the middle ear removed by snare and curette. Appropriate after-treatment greatly improved the general as well as the local condition of the child. Nearly a year after the operation the patient is able to breathe nicely through the nose; general health is much better, hearing considerably improved, and discharge from right ear has been absent for months Facial expression and general appearance much improved.

A RARE AND INTERESTING BULLET WOUND; THE BULLET SPLITTING IN HALVES, AS SHOWN BY THE SKIAGRAPH.

BY ANGUS MC LEAN, M.D.,

Clinical Professor of Surgery, Detroit College of Medicine; Attending Surgeon to Harper Hospital, Detroit, etc.

Splitting of a conical, hardened pistol bullet within the tissues of the body is almost a unique condition. The old-time soft, spherical bullet occasionally flattened or split upon coming in contact with the hard tissues of the body. The circumstances of this injury were as follows:

Mr. S——, aged thirty, a patrolman, was shot in the left arm August 27, 1899, about 11 P.M. It was very dark where he was at the time; he did not see the person that fired the shot, and does not know how far the missile traveled before hitting him. I saw him a few hours after he was injured. The ball entered the inner surface of the arm about four and one-half inches above the condyle, leaving a clean-cut wound. The arm was slightly swollen, and nothing abnormal could be discovered in the vicinity of the wound by palpation; but there was impairment of motion of the elbow-joint. I had a skiagraph of the arm taken, which is here presented.

The skiagraph shows two opaque objects—one just above the inner condyle of the humerus, the other anterior to and above the head of the radius. There are also some small, dark objects scattered along the anterior surface of lower portion of the humerus. These were at first thought to be portions of bone that had been separated from the shaft of the humerus by the ball, but they afterwards proved to be portions of the split bullet.

A few injections of cocaine solution (Schleich's formula) were made over the inner object; it was then cut down upon and removed. One of its surfaces was smooth and bright, the other convex and dark, with the margins rolled toward the dark surface. The other portion was removed in the same manner, and was similar to the former. One part weighed seventy grains, the other sixty-eight grains. The average weight of a .38-inch caliber bullet is 150 grains. Judging from the weight, shape, etc., this had evidently been a .38-inch caliber bullet.

The bullet must have been nearing the end of its flight—*i.e.*, it had passed through the "zone of explosive action" and partly through the "zone of penetration" when it reached the humerus, for the bone was not injured. I think it struck the internal border of the humerus at a downward angle, and divided itself over this margin, the portions then passing down to the elbow.

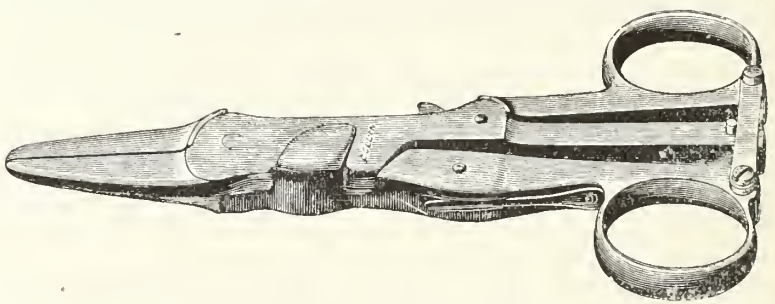
The portions of the bullet that were extracted were exhibited before the Detroit Medical and Library Association.

THE ANGIOTRIBE IN PRACTICE.

BY W. P. MANTON, M.D.,

Gynecologist to Harper Hospital; Professor of Clinical Gynecology, Detroit College of Medicine, etc., etc.

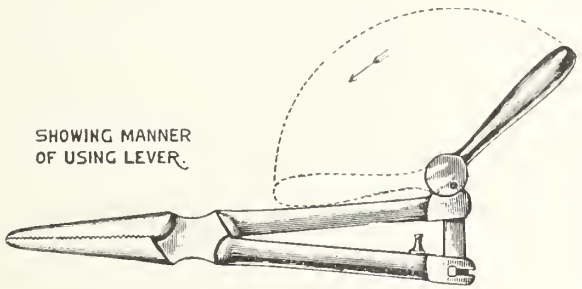
Although the hemostatic action of crushing on the tissues has long been known, the practical application of this principle in surgery is only of recent date. In 1897 Doyen introduced an instrument, the pince-clamp, for use in vaginal hysterectomy, by which the broad ligaments could be so compressed as to prevent all bleeding from the vessels, and the necessity for either ligatures or forceps thus obviated. The following year (1898) Tuffier presented a similar device, which he called the angiotribe, before the Société de Chirurgie, and shortly afterward his instrument was modified by Thumin, an assistant in Landau's clinic, who demonstrated its uses in the histories of a number of cases where it had been successfully applied by his chief.



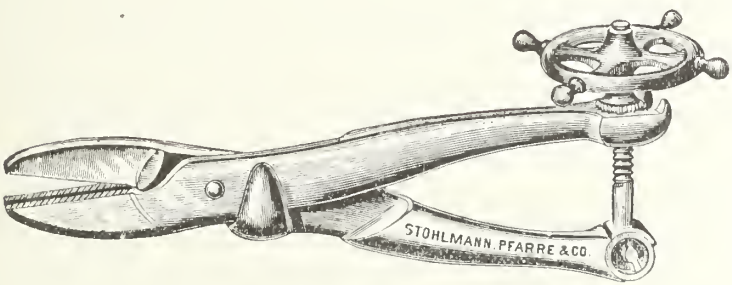
A method which will in any degree lessen the chances of septic infection in peritoneal operations must be considered as a distinct addition to surgical technique and an advance, and the doing away with the ligature, which however carefully prepared is always a possible source of microbic invasion, aids in the accomplishment of positive asepticism. The application of the pressure forceps in vaginal hysterectomy had this end in view, but was defective in that by continuous pressure the very object sought to be eliminated was frustrated through the subsequent sloughing of the tissues which invariably followed to a greater or less extent.

The rapid crushing of a limited area of tissue for a minimum period of time, however, does not appear to give rise to the same undesirable sequelæ which follow prolonged pressure, while the hemostatic effect is thorough, positive, and safe. In these lever-clamp forceps, which according to Tuffier have a pressure power of 3000

pounds, the jaws are rather narrow, serrated, and have a median groove. Applied to living tissues they produce a ribbon-like thinness of the part, along the center of which above and below runs a perceptible ridge. The effect of this crushing force is not, as might be expected, a devitalization of the included part, but a firm agglutination of the inner coats of the arteries, with thrombus formation on either side and in the middle (ridge) of the compressed portion. Hemostasis is therefore complete, and revitalization of the tissues possible.



The angiotribe of Tuffier, which has been more extensively used in this country than the other two forms of clamp forceps, somewhat resembles a pair of tinsmith's shears, and with its strong jaws, long handles, and screw-wheel appears to be a rather formidable addition to the surgeon's armamentarium. The weight (three pounds five



ounces), clumsiness, and shortness of the jaws are somewhat against it when in use, and the Thumin modification, in which these objectionable features have been removed or altered, would appear to render the latter instrument of greater practical service. While, as it has been urged, the use of such a means of securing hemostasis is against all surgical precedent and teaching, there can be no doubt

that the angiotribe has come to stay, and while the present form of the instrument will undoubtedly be greatly modified and rendered less bulky and cumbersome in the future, increasing experience in its uses will demonstrate its permanent value. In those conditions where it can be employed for the purpose intended, the angiotribe possesses great merits over either the pressure forceps or the ligature, and not the least of these is the obviating of the often agonizing pain incident to the use of the first named instruments, and the suffering and discomfort not infrequently occasioned by the casting off of an infected loop of silk or animal ligature. During the past few months I have used the angiotribe in a variety of conditions and with uniformly good results, and from the teachings of my own limited experience I accord to the instrument all of the claims put forth by its most enthusiastic advocates.

In recording the following five cases in which the angiotribe was used, only the briefest possible statements are made, the history and symptoms and special conditions found at operation being omitted:

Case 1.—Procidentia uteri; vaginal hysterectomy. Widow, aged fifty-seven. Operation at Harper Hospital, August 26, 1899. Under chloroform the uterus was freed in front and behind and the peritoneum opened in the usual way. Angiotribe applied to broad ligament on left side for two and one-half minutes, uterine connection severed with scissors, and the stump slightly cauterized with the Paquelin. On removing the angiotribe it was discovered that the Fallopian tube had escaped from the bite of the instrument, and this was then tied off with kangaroo tendon and cut away. On the right side all of the structures were included in the grasp of clamp, and the uterus was removed. Absolutely no bleeding followed. Stoltz's operation for cystocele was done on the anterior vaginal wall, and a split-flap operation on the perineum. The patient made a rapid and uninterrupted recovery.

Case 2.—Salpingo-oophorectomy, left side; resection of right tube; curettage; excision of Bartholin's gland. Single woman, aged twenty-two. Operation at Harper Hospital, August 28, 1899. Left ovary very much enlarged and entirely cystic; the tube the size of a finger, linked and containing pus. Angiotribe applied for two and one-half minutes to broad ligament, tube severed, and the stump dusted with aristol. Patient made a good recovery and has since married.

Case 3.—Pus tubes; double salpingo-oophorectomy, curettage, and ventral fixation. Girl, single, aged nineteen. Operation same place as above, September 4, 1899. Both tubes liberated from dense adhesions, angiotribe applied on either side for two and one-half minutes, and parts cut away. Patient recovered, and was well when last seen in December.

Case 4. — Chronic salpingitis and oophoritis; removal of both appendages. Patient a chronic invalid, and incapacitated from her work (sewing). Operation at same place as above, September 5, 1899. Each broad ligament clamped for two and one-half minutes, and tubes and ovaries ablated. Perfect recovery. Good health since, and is able to work.

Case 5.—Senile purulent endometritis; vaginal hysterectomy. Married woman, insane, age unknown, but over sixty. Operation at Eastern Michigan Asylum, November 5, 1899. Vagina very narrow and rigid; cervix friable, bleeding freely on slightest manipulation. Uterus freed in front and behind in usual manner and angiotribe applied to each broad ligament for two and one-half minutes. Tubes not included in bite of instrument. Uterus severed from attachments, tubes tied off with kangaroo tendon, and organ removed. Patient recovered from the operation, and convalescence was well established when other conditions supervened, to which she succumbed fifteen days later, or five days after the advent of the attack.

THE SERUM-DIAGNOSIS OF TYPHOID FEVER.

BY J. HOWE ADAMS, PHILADELPHIA, PA.

While the ability to use his judgment is the most marked characteristic in an intelligent human being, at the same time any advance in science, or the routine of human affairs, by which results may be obtained mechanically, as it were, is undoubtedly a great improvement in the proper line of progress. This is particularly true in medicine. If by any method the diagnosis of any condition or disease can be obtained by a process of absolute precision, it renders medicine just that much more of a science, and relieves the already overtaxed practitioner from much anxiety and loss of nervous force.

It has been particularly true of the last two decades that more methods of precision have been developed than at any other period of the world's medical history. The introduction of skiagraphy is in itself almost a Munchausen-like tale to the photographer of five years ago. The introduction of antitoxins has been a great success, and altogether probably we are scarcely on the threshold of this line of treatment. In many cities the municipal authorities have established institutes where examinations of bacilli, blood, and sputa are made without charge. In Philadelphia a specimen of blood or the fragment of a membrane left at any police station will be forwarded quickly to the city laboratory, and an examination and report will be returned at once, without cost, to the practitioner.

Among other subjects which have naturally attracted the attention of investigators is the subject of the diagnosis and treatment of typhoid fever. This disease, which is as insidious in its approach as the Indian on the trail, has naturally been the target for investigation for years. The advance in the treatment of typhoid fever by the use of the "Brand method" is now pretty generally accepted by the profession. The report of F. E. Hare, in which he gives ten years' experience in the treatment of this disease at the Brisbane Hospital, amounting to 1900 cases, with a mortality of 7½ per cent, while the mortality in a previous series of 1800 cases treated by the other methods was 14 8 per cent of cases, is probably generally accepted. Still the Brand treatment of typhoid fever is not wholly ideal, for it by no means meets all of the indications in the course of the disease. This is illustrated in this same table of figures from the Brisbane Hospital, in which it is shown that the mortality from perforation and hemorrhage under the two methods of treatment was about the same.

When it comes to the question of the diagnosis of typhoid fever by some test outside of the clinical picture presented by the disease, again we come into a field into which much progress has been made, although as yet apparently no definite conclusions have been accepted by the medical profession. The introduction of new ideas and new beliefs in medicine comes from the medical school.

The practitioner well advanced in years, who has been possibly misled many times by glittering reports from oversanguine investigators, is often left in doubt when a genuine advance actually comes into medical work. On the other hand the medical student of the day, receiving these advances into a mind untarnished by the knowledge of previous failures or fallacies, at once unhesitatingly accepts them as the truth. In this way, by slow infusion of new men into the profession, do the permanent advances spread.

On recently reading a book published in 1892 I was struck with the emphasis given to the diazo-reaction in the diagnosis of typhoid fever. It was stated that as a result of observation made in 1887 cases of typhoid fever, Rütimeyer concedes to this reaction a high diagnostic significance. He considers "the reaction to be one of the most constant and earliest manifestations of the disease." And yet to-day this reaction has been just about completcly discarded. Other enterprising German investigators were able by puncturing the spleen to confirm the diagnosis of typhoid fever, but such a process is entirely out of the question or practice in this country at least.

Undoubtedly the Widal test stands more favorably in the minds of the profession to-day than any other similar test. The mass of statistics in regard to it has grown considerably for the past two

years, until now we are more in a position to judge of its value than ever before. The report of Dr. Abbott, city bacteriologist of Philadelphia, which he has not yet published, is the most important and extensive ever prepared. His figures are qoted later on.

One of the most recent of the articles published on this subject is that by Drs. Grissinger and Campbell on "Cases Treated for the Widal Reaction at St. Joseph's Hospital, Philadelphia." In a report of eighty-nine cases of typhoid fever, there were eighty-eight positive reactions, making an accuracy of the test of ninety-nine per cent. In fourteen cases which proved eventually not to be typhoid fever, there were fourteen negative reactions, making an accuracy of the test of 100 per cent. The investigators state that in the single case of typhoid fever that gave a negative reaction the blood unfortunately was examined but once, so that it is possible that the reaction may have developed after the first test was made, for in a few of the cases the blood during the first days of the disease gave a negative reaction but developed a positive reaction after the disease progressed. In their cases the average day on which the reaction occurred was the thirteenth; but this statement is somewhat misleading, for many of the cases did not arrive at the hospital until comparatively late in the disease. So that the reaction might have been shown earlier had they had the opportunity of making it. In a number of the cases which were admitted early the reaction was obtained before the rose-colored spots developed.

In seventy-one of these cases but one examination was necessary to obtain a positive reaction. In the remainder reaction was obtained on the second or third examination, with the exception of the one negative case above cited. The authors cite a case in which the practical diagnostic value of the test was nicely demonstrated. The patient was a young woman nineteen years of age, who had given birth to a child November 9, 1898. She had apparently made a good recovery, when on the 29th of November she was taken sick with a high fever and great headache. On vaginal examination the uterus was found to be greatly enlarged and infected, and there was present considerable bloody discharge. There was also great tenderness both on vaginal and abdominal palpation. The clinical symptoms were not at any time typical of typhoid fever, and although the spleen was markedly enlarged the history of the case, the nature of the temperature, the absence of rose-colored spots, and the result of the vaginal examination, were regarded as probably septic in origin.

On the seventeenth day of the disease the Widal test was tried and gave a positive reaction in three minutes. The patient died December 9, 1898. At the post-mortem examination the spleen was found

to be greatly enlarged, soft, and with a dark surface. The mesenteric glands were greatly enlarged. Typical typhoid fever ulcers were found in the duodenum; follicular ulcers were found also in the duodenum; and a few follicular and round ulcers were found in the cæcum. The uterus was twice the normal size; the cervix was cyanosed; the endometrium was thickened and rough. The tubes and ovaries were perfectly normal. Cultures of the typhoid bacilli were obtained from the spleen, mesenteric gland, and bile.

In spite of the clinical symptoms the Widal test showed the case to be one of typhoid fever, and the post-mortem examination confirmed this diagnosis beyond any possibility of doubt. Without the Widal reaction the case could never have been diagnosed during life.

Osler in his Practice of Medicine states that the largest collection of cases has been given by Kneiss and Stengel. Of 2283 typhoid cases the reaction was present in 95.5 per cent. In 1365 non-typhoid cases there was no reaction in 98.4 per cent. In Osler's own experience in 151 cases, there was reaction in 144, and in four of the negative cases the clinical course made the disease uncertain. In only forty-six of the last 108 cases was the reaction obtained on the day of admission, while in four cases it developed on the twenty-second, twenty-ninth, thirty-fourth, and forty-second day respectively. Recently Dr. A. C. Abbott, city bacteriologist, has stated that in the city laboratory, in examinations of 4154 cases, there was a percentage of failure of only 2.8. This is the largest number of cases examined by any one pathologist and must be accepted as conclusive. Dr. Abbott has not, however, as far as I know, published his results.

The question of the extension of the use of the Widal test is both interesting and practical. Fryer, in the *British Medical Journal* of August 7, 1897, states his investigations in the use of the Widal test to decide the problem of the alleged immunity of the natives of India to typhoid fever. He found that in children above two years of age the reaction was frequently present, and he concludes from this fact that typhoid fever is so wide-spread among these people that but few of the youngest children escape it. He presents a curious and ingenious explanation of the increasing mortality from typhoid fever among English soldiers in India. He states that in former years a large proportion of the British soldiers had typhoid fever before they went to India; now that disease is so decreased in Great Britain that the average soldier is now much more susceptible to conditions existing in India.

Another interesting question is the value of the test in prognosis. There have been many reports upon this point, but it seems to be the general consensus of opinion that the test has no prognostic value

whatsoever. A moment's reflection will show that there is no reason why it should be of any value in prognosis.

It has been suggested by some investigators of this test that in some cases where the reaction was positive, and yet the disease, clinically, did not run a typhoid course, possibly there may be typhoid infection without genuine typical typhoid fever; that patients may become partially immune to the disease, and thus be able to overcome it within a short space of time.

One possible source of error which the practitioner must bear in his mind is the possibility of obtaining the reaction many years after the patient has had typhoid fever. Urban reports a case in which the reaction was present fifteen years after the disease. Now should such a patient develop clinical symptoms of typhoid fever, the Widal test might lead to an error in diagnosis.

The disadvantage of the test is that it requires a certain amount of skill and training to obtain the proper results. Undoubtedly much of the data which is conflicting is due to mistakes in the method of treating the blood. In the case of a number of observers the results have been not merely negative but frequently misleading. In the report of a series of obscure cases in the Pennsylvania Hospital, Dr. Arthur V. Meigs states that in two cases of undoubted typhoid fever the test was negative on repeated examinations, while in two cases, probably not typhoid, it was positive, and that in a case of jaundice in which the blood was examined by mistake the Widal test was positive. Therefore he is not enthusiastic over the value or accuracy of the test. The criticism that the blood was not properly examined he claims scarcely holds good, for the examination of the blood was made by one of the most skilful of Philadelphia's bacteriologists.

Undoubtedly, instead of being allowed to dry, the blood should be diluted in its first state with a known quantity of distilled water; then the immobilization and agglutination of the typhoid bacilli which occurs when a pure culture of the bacillus is added to the serum of a typhoid fever patient, which proves the basis for the Widal reaction, will be attempted under the most approved method of examination. After cleansing the part and obtaining the blood in the usual manner, the blood is drawn into the pipette to a point marked 0.5 cubic centimeter. The pipette is then transferred to distilled water, and this is drawn up to the point marked 11 cubic centimeters. This gives a dilution of one part of blood to twenty-two parts of distilled water, or one part of serum to about fifty parts of water. After being thoroughly mixed in the pipette the fluid is blown into the test-tube, and is ready for examination. A drop of diluted blood is placed in a clean cover-glass by means of a platinum loop; to this is added

a pure culture of the typhoid bacillus. The cover-glass is then inverted over a concave glass slide, is sealed by means of vaselin, and is then examined under the microscope with the oil immersion lens. Ffteen minutes is the time allowed for the reaction to take place.

The principal advantages of this method are that by means of the pipette an absolutely accurate dilution of the blood is obtained, while in the dry method the dilution can only be guessed at; and secondly, in the "wet method," there is less violence done to the blood than in allowing it to dry and redissolve.

It would seem to me that the proper position of the Widal test is that it should take its place along with the classical clinical symptoms of the disease, and that its proper weight should be that of confirming a diagnosis made at the bedside.

ACCORDING to the *Philadelphia Medical Journal*, in 1807, William Case, the son of an old New England loyalist, left Pennsylvania, and settled near the end of Lake Ontario, at the place now occupied by the city of Hamilton. One of his sons, William Ira Case, known in the neighborhood for three generations as old Dr. Case, passed away on December 2, aged ninety-two. The old doctor, his father, and son had lived in the same house for many years, and the city had grown up around it till it was one of the landmarks. In the *Canada Medical and Surgical Journal*, 1883, there is a description of the old surgery door of the house, which was probably unique in the annals of the profession: "The patients' entrance is in a side street, and a small porch protects the visitor. The steps are well worn and the native grain is everywhere visible in the wooden surroundings. There is neither bell nor knocker, and the door presents interesting and, so far as we know, unique evidences that votaries to this Æsculapian shrine have not been lacking. On the panels at different heights are three well-worn places where the knuckles of different heights of successive generations of callers have rapped and rapped. The lowest of the three, about three feet from the floor, represents the work of 'tiny Tim' and 'little Nell,' so often the messengers in poorer families. Higher up and of less extent is a second depression where 'Bob' and 'Sis' have pounded, and, highest of all, in the upper panel of a wider area, where the firmer fists of the fathers and brothers have, as the years rolled on, wore away the wood to nearly half its thickness. Such testimony to the esteem and faith of successive generations of patients is worthy of preservation."

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

PROGRESS IN THERAPEUTICS.

Whether we have reached the end of an old century or the beginning of a new one, a retrospective glance at last year's progress in therapeutics must satisfy us that a commendable amount of zeal and mental activity has been displayed in this branch of medical science, not so much perhaps in the matter of discovering new methods of treatment as in the systematization and organization of knowledge already acquired.

This broadening of common knowledge has been well exemplified in the matter of tuberculosis, where great progress has been made in grasping the significance of prophylactic treatment. The establishment of institutions for the isolation and treatment of tuberculosis has not as yet been put into general effect, but the indications are that this will very speedily take place. The destruction of sputum is very generally carried out. In the treatment of bronchopulmonary affections probably the most notable contribution of the year has been that of Jakob and others, showing the extreme value of carbonate of creosote in the initial stages of lung disease. Given in full doses of forty grains four times a day, it is said to exhibit an immediate ameliorating effect.

Inoculation methods of treatment have been tried principally in regard to the plague. The results of this method of treatment have not as yet been fairly estimated, but in the opinion of many observers a mortality saving of forty per cent may be considered as resulting from a serum treatment of this disease. The preventive treatment of typhoid fever by means of an antityphoid serum is also a matter upon which a positive verdict must be suspended. The opportunities for exhibiting this treatment at present existing in South Africa will probably result in some definite increase in our knowledge.

Since the establishment beyond dispute of the curative and preventive virtues of antitoxin in diphtheria, serum therapy has scored no more signal triumph than that which it has this year achieved in the treatment of snake-bite by antivenene serum. Evidence is daily accumulating that if given within three hours after snake-bite antivenene serum is capable of saving life. Anti-streptococcic serum has been used very largely during the past year, and a preponderance of evidence exists of its undoubted value in cases of septicemia of various kinds.

Medical literature abounds in cases demonstrating the great value of intravenous injections of normal saline solution in various toxemic conditions. This is likely to become an ordinary therapeutic expedient in the treatment of diabetic coma, uremic conditions, and other toxemias. A notable contribution to therapeutics has been the device by Finsen, of Copenhagen, whereby he treats cases of lupus vulgaris by the concentrated chemical rays of light. He reports 350 patients having been subjected to this method of treatment, and in nearly all cases the disease was arrested and the cosmetic results excellent. Schiff, of Vienna, has used the x-rays for a similar purpose. A remarkable success has also been found to accompany the x-rays for the removal of superfluous hairs.

Among the many valuable therapeutical suggestions of the year may be mentioned the use of methylene blue in diabetes, erythrol tetranitrate in arterial tension, suprarenal extract in asthma, urotropin in cystitis and uricemia, bromalin in epilepsy, and formaldehyde in hyperidrosis.

EDITORIAL NOTES.

The Feminine Faculty of Invention.

Among the more interesting of the sociological phenomena presented us recently must be mentioned the increasing number of women who are becoming inventors. The records of the patent office show a very large number of inventions that are the product of woman's brain. A Rhode Island woman invented a buttonhole-cutting machine that is of great value to garment-makers. Another versatile female intellect has invented a lock with 3000 combinations, and a woman has recently invented an electric apparatus for removing the wool from skins. Another has invented a desulphurizing method for treating ores. These more serious achievements do not include all the complexion soaps, toilet knickknacks, and a thousand other things found in drug stores that are usually of woman's invention, and there

can be no denying the widening application of woman s intellect to the problems of daily life. The feminine faculty of invention forms one of the psychological factors that must be taken into account by those who forecast or foretell.

Vaccination.

The prevalence of smallpox calls for renewed energy in the matter of vaccination. Lest the operation be a failure, it is well to remember a few points always in danger of being forgotten. Remember that antisepsis is inimical to vaccine. Do not therefore wash the arm with a strong antiseptic, or if an antiseptic be applied rinse the surface thoroughly with boiled water afterwards. For a similar reason do not apply an antiseptic dressing. The most successful vaccinators apply no dressings, and they are only called for if there is danger of other infection from contiguous parts. In scarifying do not draw blood. Rub the vaccine thoroughly into the abrasion. Be sure of the vaccine. Exposure to extremes of temperature spoils it. Lymph that has been glycerinated is stated by investigators to be freer from streptococci than other forms. The old fashioned results of vaccination—sore arms, fever, and constitutional sepsis—must be regarded as the outcome of old-fashioned methods. The modern man is free from these unpleasant experiences.

The Endowment of Research.

A philanthropic lady who died two years ago has set an example that might be followed with benefit in leaving to Harvard University $100,000 to be used in investigation into the nature and origin of cancer. The terms of the will read that if the discovery of the origin of cancer shall be accomplished, the income shall be applied toward the discovery of the source of some other disease. Dr. E. H. Nichols, of the Harvard School, has been made the first appointee under this trust, and will institute experimental work leading to the acquisition of this much desired knowledge. Millionaires and others seeking for a means of doing some practical good may take example from this benefactress of her race.

ITEMS AND NOTES.

MEASLES is reported to be epidemic among the children at Newburg, N. Y.

SMALLPOX has broken out among the Indians in the Colville Reservation, Washington.

AN international congress on malaria is to be opened by the Liverpool School of Tropical Diseases.

SIR JAMES PAGET, the famous English surgeon, died in England Dec. 4, 1899, at the age of eighty-six years.

THE new building of the Royal London Ophthalmological Hospital was recently thrown open for patients.

BERIBERI has been epidemic among the Chinese population in Hong Kong during the past summer and autumn.

TWO sanatoria for tuberculosis are planned in Spain, one in the Malaga Mountains and the other at Porto Coeli.

THE British Medical Association will hold its sixty-eighth annual meeting at Ipswich from July 31 to August 3, 1900.

DIPHTHERIA is so prevalent in the Philadelphia public schools that a number had to be closed for purposes of disinfection.

THERE are twenty-eight women students at the University of Kiel, of whom five are between fifty and seventy years of age.

A RECENT report from Calcutta states that nearly three million persons are receiving aid from the famine relief fund.

THE colonial office of the British government has given official recognition to the Liverpool School of Tropical Medicine.

AT Newschwang, India, where the plague prevails, a staff of Japanese medical men have been engaged for service there.

THE University of Moscow will open a school for postgraduates, in which clinical instruction in twelve subjects will be given.

ON December 20, 1899, a statue of the late William Pepper was unveiled in the Free Museum of Science and Art in the city of Philadelphia.

Recent legislation in England has resulted in a great decrease of cases of lead poisoning in china and earthenware manufactories of the country.

Dr. Nestor Terarm has been appointed to the chair of medicine at King's College, London, in the place of Dr. Burney Yeo, who has resigned.

A number of British medical societies have passed a resolution granting free medical attendance to the families of those who are fighting in the Transvaal.

At a recent meeting of the New York Academy of Medicine, a resolution was adopted recommending the establishment of both State and municipal sanatoria for consumptives.

There is a very peculiar and obscure malady prevalent in the community of Madison township, Pa. It is thought by some that the disease is cerebrospinal meningitis.

Professor Ogston, of Aberdeen, has gone to South Africa for the purpose of taking advantage of the opportunities there offered for the study of military surgery.

Bigamists in Hungary are compelled to submit to a queer punishment. The man who has been foolish enough to marry two wives is obliged by law to live with both of them in the same house.

Dr. Robert Fletcher, principal assistant librarian of the Surgeon-General's Library, Washington, D. C., will soon begin a course of lectures on forensic medicine at the Johns Hopkins Hospital.

W. Abel (*Munch. Med. Woch.*, No. 48, p. 1607) reports a case of gastroenterostomy successfully performed upon a child two months old for the cure of congenital hypertrophic stenosis of the pylorus.

The number of medical students at the University of Budapest has steadily declined since 1890, in which year there were 219 students entered, 165 in 1891, 177 in 1892, 187 in 1893, 170 in 1894, 150 in 1895, 111 in 1896, 131 in 1897, 126 in 1898, and 117 in 1899.

By the will of the late Mr. Daniel S. Ford, of Boston, proprietor of *The Youth's Companion*, the Massachusetts General Hospital receives $7000, the Boston City Hospital $6000, and the Children's Aid Society and the Children's Hospital of Boston each $5000.

At the thirtieth annual meeting of the Northwestern Medical and Surgical Society the following officers were elected for the ensuing year: President, Dr. R. A. Murray; Vice-President, Dr. Frank Grauer; Treasurer, Dr. Robert H. Green; Secretary, Dr. S. Henry Dessau.

In the budget of the German Empire for 1900 there appears for the first time a subsidy for the Institute of Tropical Hygiene which it is proposed to establish in Hamburg. The empire will contribute $6000 yearly to the maintenance of the institute, which is to be opened October 1, 1900.

It is stated in *The Hospital* that Japan possesses several specially equipped hospital ships for use in warfare. The ships were built in England, and in time of peace are used as passenger boats. Arrangements have been made for special wards for the isolation of infectious cases, and a distinct sanitary service will be organized in case of war.

An exchange is authority for the statement that women have at last received recognition as practitioners in Germany. It is said that one Agnes Nacker has been admitted to practice; she will reside in Berlin. Her case has been under consideration by the Prussian cabinet for the past two years, and has finally been decided in favor of granting her a license to practice.

According to an exchange, a project is about to be launched in Colorado which is apparently of more value in the treatment of consumptives than anything that has heretofore been offered. It is proposed to establish from Denver south a series of plantations, which shall be under State control, but so far as possible will be made self-sustaining by the labor of their inmates. These are to be opened to those consumptives who can afford the price of transportation.

A medical strike is reported from Luben in Silesia. All the doctors of the sick benefit society of the district have sent in their resignations, to take effect January 1, 1900, the reason being the miserable rate of pay. This is two shillings a year for each member, and out of it has to be paid the cost of traveling, including not only the doctor's journey, but that of the patient to him. Only the balance after these disbursements is paid to the doctor. The medical men ask for three shillings, which certainly does not seem excessive.

The Viceroy of India, Lord Curzon, says an exchange, is said to be the latest convert to the claims of serum-therapy in the prevention of plague. He has recently been making a circuit of hospitals and segregation camps at Poona. In a recent address upon the subject he stated that the deaths among patients who had been treated with the serum amounted to only twenty per cent, while of those who did not receive the serum over eighty per cent died. As a result of his faith in the preventive power of the serum, he and his entire family have been inoculated.

ACCORDING to an exchange, Dr. Kossinski, professor of surgery at Warsaw, and Dr. Solmann, who has a private surgical-gynecologic hospital, were sued for damages (42,000 rubles) by the family of a patient who had died from the effects of a forceps left in her abdomen after an operation. The lower court acquitted the defendants, but an appeal to a higher court has resulted in the condemnation of Dr. Solmann to a penalty of 920 rubles and severe censuring by the authorities. Professor Kossinski was acquitted.

ACCORDING to the *Journal of the American Medical Association*, the annual prizes of the Paris Académie de Médecine were distributed in December, amounting to $7600, not including the famous Audiffred prize for a sovereign remedy for tuberculosis, for which the income from an endowment of $144,000 is waiting. There were 171 competitors for the twenty-seven prizes. All were awarded to natives of France or the colonies, although the competition is international. No serious communications were received from the country, it appears.

ACCORDING to the *Philadelphia Medical Journal*, the Rev. De Witt Talmage Van Doren, a Baptist minister in Norwalk, Conn., having gained for himself much notoriety by his assertions that he could cure by mental treatment "any disease, no matter what its character or cause," Dr. Joseph Collins, of New York, proposed that he be allowed to select a case of known and real disease, on which the reverend gentleman might then exert his healing powers. Dr. Collins included in his proposition an offer of $1000 to Mr. Van Doren's church if the latter should succeed in curing the person by his method of treatment. Although assured that the offer was a *bona fide* one, Mr. Van Doren declined to be subjected to this seemingly fair test.

ACCORDING to the *Journal of the American Medical Association*, the first medical school and dissecting-room building in the city of Baltimore has been discovered and photographed. It is a long, narrow, two-story brick structure, and was built by Dr. Charles Frederick Wiesenthal, physician to Frederick the Great, who came to Baltimore in 1755, when this was a small village. He died here June 1, 1789. The building was probably erected shortly after his arrival. We know of its use about 1770. Dr. Wiesenthal was an accomplished and learned physician who jealously maintained the dignity and honor of the Baltimore profession. He was termed the "Sydenham of Baltimore," and may be considered the father of the profession here. His services during the Revolution were of inestimable value to Maryland. After his death the school was continued by his son Andrew, who died in 1798, when it was sold.

NEW PUBLICATIONS.

A TEXT-BOOK OF VENEREAL DISEASES.

It seldom falls to our lot to call attention to such a genuinely original work as the one before us. Dr. Lydston's graceful and prolific pen has already made him well known in literature. He has given the profession a text-book on genito-urinary and venereal diseases which cannot fail to edify and instruct. The author confesses to the insertion within his pages of certain heretical views. These, however, are always stated with moderation, and he never fails to give a reason for the faith that is in him. That portion of the manual dealing with genito-urinary diseases has been conceived in the spirit of a practical clinician. It abounds with ample exemplification of the accepted doctrines of disease, and comprises the enumeration of many new and original expedients. Perhaps the most attractive part of Dr. Lydston's work is that in which he discusses the sexual instinct in its sociological aspects and in its aberrant forms. The whole work will be found very attractive reading, its conspicuous literary merits imparting to it a value few such works possess. Nothing but a substantial literary success can be predicted for this book.

The Surgical Diseases of the Genito-Urinary Tract, Venereal and Sexual Diseases. A Text-book for Students and Practitioners. By G. Frank Lydston, M.D. Illustrated with 235 Engravings. Philadelphia, New York, Chicago: The F. A. Davis Company, 1899.

MEDICAL DIAGNOSIS.

Professor Musser's work on medical diagnosis has already acquired a reputation in its first edition which subsequent editions have only enhanced. Success in the treatment of disease can only follow diagnosis of a comprehensive character, and the *status præsens* should be clear to the physician at the outset and at every stage of the disease. There is no royal road to diagnosis, and judgment is just as difficult now as it was in the time of Hippocrates. The purpose of this book is to provide the reader with the facts and principles upon which he can make his diagnosis. The new edition has been revised and is much enlarged and thoroughly up to date. It is handsomely illustrated with engravings and colored plates. The profession will undoubtedly number this work among the most valuable of its recent acquisitions.

A Practical Treatise on Medical Diagnosis for Students and Physicians. By John H. Musser, M.D. Third Edition, Revised and Enlarged. Illustrated with 253 Woodcuts and 48 Colored Plates. Philadelphia and New York: Lea Brothers & Co.

DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EYE.

The student will find this book an excellent teacher, giving him a thorough insight into what is most important to him in ophthalmology—the recognition and management of the conditions likely to be presented early in practice. Chapter XX, dealing with ocular symptoms and lesions connected with general disease, is most worthy of the attention of the general practitioner. The author's well known position in the world of ophthalmology places this work in the front rank as a text-book for students and practitioners.

A Manual of the Diagnosis and Treatment of the Diseases of the Eye. By Edward Jackson, A.M., M.D. With 178 Illustrations and 2 Colored Plates. Philadelphia: W. B. Saunders, 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Radical Cure of Hydrocele by Eversion of the Tunica Vaginalis.

S. C. Dass (*Indian Medical Record*, Nov. 22, 1899) reports a case of hydrocele of eight years' duration which he operated upon by making a longitudinal incision about five inches in length in the affected side of the scrotum, and carefully dissected down to the tunica vaginalis. The sac of the hydrocele being laid open by a sharp-pointed bistoury, about 1¼ pints of straw-colored fluid escaped, and the tunica was found to be enormously thickened. The testicle with the tunica being brought out of the wound, the tunica was everted, fixed in its new position by two catgut stitches, and the whole lump returned into the scrotum, after which the external wound was closed with several horsehair stitches, but no drainage was applied. The healing was rapid.

The writer says his object in bringing this operation to the notice of the profession is because it succeeds where tapping and injection —not always reliable—fail, and because it is vastly superior to the operation of excision of the sac, and that it is simpler, takes less time, needs a smaller wound, causes less bleeding, secures union by first intention, and promotes rapid healing without necessitating drainage or removal of the sac.

Sensation in Transplanted Skin-flaps.

Stransky (*Wien. Klin. Woch.*, Nos. 32 and 33, 1899) draws the following conclusions from his investigations on this subject: (1) The sensation of pain is to be separated from tactile sensation and from the sensation of temperature. (2) Sensation in transplanted skin-flaps begins at the margin, the tactile being first distinguishable, and the sensation for pain and temperature developing later. (3) With large skin-flaps certain areas may remain permanently or for a long time more or less anesthetic, which fact probably depends on a varying nutrition of different parts of the graft during the process of healing. (4) The specific mechanism of sensation is probably transferred ready-made with the flap, and the nerve-end organs (Meissner's and Merkel's tactile bodies) in the graft join the nerves which penetrate into it from the underlying tissue, and continue their former function. This applies more especially to tactile sensation, which

nearly always corresponds to the conditions obtaining in the part from which the flap was taken, and not at all to those obtaining in the part to which it is transferred. This rule could not be distinguished clearly in the case of the sensation of pain.

Botryomycosis in Man.

Delore (*British Medical Journal*, Dec. 23, 1899) reports a case of this rare affection. The patient was a peasant woman, aged fifty-four, with a tumor on the hand, as usual in botryomycosis. It lay, attached by a short pedicle to the ulnar border of the hand, close to the little finger; in appearance it looked like a small strawberry. It had no epidermic covering. It began six months before observation as a wart which frequently bled; then it grew steadily and bled more and more, so that the patient applied for hospital relief. The botryomyces was difficult to find. Dor prepared some specimens in association with Delore's case, in order to demonstrate the different appearances of streptococcus, actinomyces, and botryomyces. The parasite in question probably invades a sudoriparous gland first, the tumor beginning as an active proliferation of sudoriparous glandular tissue, at first subepidermic. The free development of vessels in the tumor is always marked. There were never any general symptoms in man, but the tumor in all recorded cases was removed early, the patient being alarmed at the bleeding.

MEDICINE.

Gout.

A. P. Luff (*The Lancet*, Nov. 18, 1899) says that in cases of acute gout the gouty paroxysm must be treated and the severe pain must be relieved. This can be effected by the free administration of colchicum and potassium citrate, and by a mild blue pill and Epsom salts purge. The painful joint or joints should be packed with wool saturated with a warm alkaline and anodyne lotion.

The elimination of uric acid should be promoted. For this purpose free diuresis should be encouraged by the administration of plenty of water and by the employment of potassium citrate or potassium bicarbonate, or similar salts, which exercise a diuretic effect, and which at the same time diminish the acidity of the urine. For the same purpose green vegetable food should be freely taken.

The excessive formation of uric acid should be checked. This object is mainly attained by a carefully selected dietary. When once

the acute attack of gout has subsided there is no necessity to exclude butcher's meat from the dietary of the gouty. On the contrary, it is better for most patients that it should be moderately partaken of. Although a mixed diet is best suited to gouty patients, yet it is important that the dietary should be a simple one, and it is especially desirable to avoid at any one meal much mixing of proteids and carbohydrates. The stomach of a gouty patient, unlike that of a healthy individual, is not well able to digest half a dozen different kinds of food at the same time. The metabolism of the liver should also be promoted by the administration of guaiacum, by an occasional mild cholagogue pill, and by keeping the bowels open.

Attention should be paid to general hygiene. It is important to insist on suitable exercise being taken as soon as the patient is fit for it. It is interesting to note that the investigations of Dr. R. Cato into the treatment practiced by the ancients at the temples of Asklepois demonstrate that the priests very successfully treated gout by prescribing plain and simple diet, use of water internally and externally, massage, active gymnastic exercise, and exercise in the open air. Golf and cycling are two excellent exercises, in moderation, for the gouty.

Enlarged joints and other gouty deposits should be treated with a view to the removal of the deposited sodium biurate. This important branch of the treatment of the gouty can be carried out in various ways. Massage and muscular movements increase the flow of lymph in the lymph channels, and so tend to promote the removal of uratic deposits and to increase the metabolism of the joints. This treatment may with great advantage be combined with the passage of the constant current through, and the employment of cataphoresis to, the affected joints and tissues. I have had excellent results in several cases from such treatment. Baths of various kinds, including the superheated air and radiant heat baths, are most valuable. Suitable treatment at a properly selected spa is also of great benefit.

THE RÔLE OF THE BLOOD-SUPPLY IN MENTAL PLEASURE AND PAIN.

W. R. Dawson (*Medical Press*, Dec. 6, 1899) sums up the results of his inquiry into this subject as follows:

1. The emotional state produced by brain anemia when gradual in onset, not too profound, and of some duration, is depression.

2. Anemia of rapid onset and considerable degree tends to produce convulsions and excitement.

3. The characteristic feature of the general circulation in mental depression is high arterial tension, which helps to maintain, if it does

not cause, the painful mental state; but there is no conclusive evidence of the condition of the cerebral circulation.

4. In mental depression the blood is impoverished.

5. Under experimental conditions high oxygen tension in the blood supplied to the nerve cells produces excessive action and possibly exhilaration, but there is no real evidence that such symptoms are ever due to this cause under ordinary circumstances.

6. The characteristic feature of the general circulation in excitement, and probably in exaltation, is low arterial tension. Here, again, there is no direct evidence of the state of the cerebral circulation.

7. This low arterial tension helps to maintain, if it does not cause, the mental state.

The speaker concluded by deprecating a hard material conception of psychology except in the limited sense defined at the beginning of the address, and by urging the importance of psychological observation on the part of the general profession.

Acute Gonococcus Peritonitis.

At a recent meeting of the Berlin Society für Innere Medizin Hr. V. Leyden (*Medical Press*, Dec. 20, 1899) related a case of acute gonococcus peritonitis with demonstration of a bacteriological condition of general interest. A woman, aged twenty-nine, had been in the medical clinic for fourteen days. She was much reduced, suffering from high fever and ascites. The diagnosis was difficult, as there were but few points of indication. Two years ago the patient was pregnant, then jaundice came on, and labor was induced artificially by the medical attendant. Later, swelling of the abdomen came on, the condition varied, sometimes becoming better, sometimes worse, without anything giving an opportunity for a diagnosis; urinary trouble of uncertain character was also complained of. The urine showed no albumin. Puncture of the abdomen was made twice; the liver after removal of the ascites was found to be rather indurated, but not enlarged; no tumor was found in the pelvis. The ascitic fluid, which was examined, but not very carefully, showed a fluid tolerably rich in cells, but nothing abnormal. The temperature, persistently high, rose to 39.6° C.; then there was slight diazo-reaction in the urine, nothing in the lungs. Then the fever got much worse, with vomiting, and death took place. The autopsy showed the following: The liver contracted, nodular, cirrhotic, strong interstitial hepatitis, the spleen enlarged. Whether the deceased was a drinker was not ascertained. This condition explained the ascites, but not the continuous fever.

The condition of the fluid remaining in the abdomen was surprising; it was markedly purulent. The liver and intestines were thickly coated with fibrin; there was therefore acute peritonitis. The question then arose as to the cause for the peritonitis, and the bacterium coli was first thought of. The assistant, Dr. Adam, examined and found cells which he declared to be gonococci. The speaker, and also Dr. Michaelis, confirmed this decision. Cultivation on the ascitic soil showed pure cultivation of gonococci and nothing else.

The Diet in Typhoid Fever.

Nearly all writers are agreed, says Maurice Manges in the *Medical Record* of January 6, 1900, in maintaining that the diet during the febrile stage shall consist either of milk alone or some preparation of it, beef juice, or tea, or bouillon, gelatins, meat peptones and similar preparations, eggs, various gruels and broths, and alcohol, also a few vegetables and fruit juices; but on one point they are one and all unanimous—that under no condition shall solids in any form be allowed the febrile typhoid patient, and that even in the administration of liquid foods especial care should be taken that these be chosen with reference to their blandness and to the amount of residue which is left after they have been digested in the stomach. One writer has even gone to the extreme of stating that even milk itself ought not to be allowed, since it is a good culture medium for the typhoid bacilli, and hence he has recommended preparations with malt, because it has been shown that the typhoid bacilli do not thrive in this medium. As to the diet after defervescence, writers are again quite unanimous in stating that no solids of any kind should be administered until at least seven to ten days have elapsed after the establishment of a normal temperature, and when the fruit diet is departed from at this stage the utmost care should again be exercised in the selection of bland articles of nourishment.

Acute Hydrocephalus—Acquired Form.

A. Heidenhain (*Berliner Klinische Wochenschrift*, Dec. 4, 1899), after a careful review of the work of other writers on this subject and from four cases which came under his own observation, draws the following conclusions: (1) This is a disease *sui generis;* it may be acute or chronic, the former form being curable, while the latter is not so. (2) Death results from a gradual decline of the sensorium or from intercurrent disease. (3) Etiologically, a direct damage to the brain is not necessary for the development of this condition. (4) The disease is caused by exposure to cold, and it is to be considered as a

result of a reflex vasomotor neurosis. (5) The acute exacerbations are due to the fact that the serous exudate overcomes the elasticity of the brain structure and a new effusion takes place. (6) The theory that "horror vacui" is an important factor in its production is groundless. (7) The treatment in the successfully treated case was large doses of morphine subcutaneously; this caused not only rest, but relaxation of the vasomotor system. (8) Even in the very chronic forms morphine is indicated, or suppositories of codeine. (9) Hot douches and compresses may be applied to the closely shaven head, with some hope of benefit.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Bacillary Metastasis in Typhoid.

Neuhaus (*Munch. Med. Woch.*, No. 48, p. 1597) was first, in 1886, to ascribe the formation of roseola spots in typhoid to the presence of the specific bacillus typhosus. His conclusions, as well as those of Thiemich (1895), were questioned by such authorities as Gaffky, Frankel and Simmonds, Chantemesse and Widal, Merkel and Goldschmidt, Janowsky, Lugatello, whose results had been uniformly negative. In 1899 Neufeld took up the same line of research and was able to confirm the statements of both Neuhaus and Thiemich.

H. Curschmann, himself a former skeptic, wishes to go on record, and believes that typhoid bacilli may be most frequently, if not always, found at the site of the eruption, and that their presence at certain stages of the disease is perhaps to be regarded as a matter of fact.

He believes that a bacteriologic examination of roseola spots may serve in exceptional cases to confirm an otherwise impossible diagnosis suggesting, for instance, typhus levis or ambulatorius, besides those uncertain febrile conditions in which typical symptoms have either failed to materialize or possibly retroceded before a diagnosis could be made.

Venous Thrombosis in Chlorotic Patients.

Referring to spontaneous thrombosis of the veins in chlorotic patients, Leichtenstern, of Cologne (*Munch. Med. Woch.*, Nov. 28, 1899, p. 1603), reports eight cases occurring in his hospital practice within the last six months. The symptoms—aside from those cases

in which the inflamed vein may be directly tangible—consist in localized tenderness, peripheral edema, and a febrile condition, while in some cases the superficial location of the affected vein, *e.g.* the saphena, will induce a certain amount of periphlebitic infiltration characterized by the appearance of a congested streak. While it would be preposterous to ascribe all circumscribed tenderness in the lower limbs of chlorotic patients to thrombosis, it is nevertheless advisable to consider the possibility of its occurrence at least in cases of protracted localized tenderness, for fear that injudicious exercise, and possibly massage, might induce a rapidly fatal embolism of the pulmonary arteries. Leichtenstern believes the percentage of venous thrombosis in chlorotic patients to reach very nearly one per cent, and gives a statistical report of eighty-six cases. Pregnancy, obesity, hemorrhages (menorrhagia, hematemesis, etc.), have a tendency to favor its occurrence.

THERAPEUTICS.

Treatment of Tuberculosis of the Bladder.

W. Watson Cheyne (*British Medical Journal*, Dec. 30, 1899) says that the treatment may be either medical or surgical. Unfortunately, by neither method can we with any certainty bring about a cure, but nevertheless much may be done to relieve the patient's distress. Medically, good hygiene, country or seaside air, etc., are of the first importance, and light exercise is also advisable. In acute cases relief may be obtained by warm saline baths, mustard to the hypogastric region, warm water injections into the rectum, etc. The food should be light and easily digestible, and consist essentially of large quantities of milk. Cod-liver oil should be given in large doses, and benefit may also be obtained from the use of arsenic, creosote, opium, and belladonna for the pain, etc. These means are, however, often ineffectual, and local measures are frequently adopted, more especially washing out the bladder so as to get rid of the pus and mucus, and injecting various substances, such as weak cocaine or opium, to relieve the pain, or antiseptic substances with the view of trying to interfere with the growth of the bacteria. Warm boracic lotion, about from three- to four-per-cent, is one of the most suitable fluids for washing out the bladder. Iodoform and glycerin is often injected into the bladder and left in, but the results are disappointing. Iodoform and vaselin, about six drachms of a five-per-cent mixture, has been strongly advocated by some French surgeons. Injections of nitrate of silver, which are of use in other forms of cystitis, almost always do harm.

The instillation of weak sublimate solution (1-in-1000 to 1-in 5000) has been employed, and is much praised by some. Cocaine and opium injected into the bladder are very transient in their effects, and must be very carefully used, as they are apt to be absorbed. Benzoic acid taken internally helps to keep the urine sweet. Pills of iodoform in half-grain to one-grain doses, tincture of buchu, triticum repens, etc., may be employed. Attempts have also been made to increase the capacity of the bladder by gradual distention with fluid. The operative interferences consist in opening the bladder and draining it, in attempting to remove the tuberculous ulcerations, or in applying antiseptic substances to them.

The Silver Nitrate Injection Method in the Treatment of Pulmonary Phthisis.

Dr. T. J. Mays (*Philadelphia Medical Journal*, Dec. 30, 1899) says that he has used the silver nitrate injections over the course of the vagi in the neck in the treatment of pulmonary phthisis for more than a year, and has had the most gratifying results, having given decided beneficial effects in the cough, expectoration, appetite, sleep, night sweats, and general strength. The writer says it has been his plan to give most of the injections on the side of the neck below which the infected lung is located. He says that after much experiment he concluded that from four to seven minims of a 2.5-per-cent solution of silver nitrate was sufficient to bring about the desired degree of irritation. Sometimes the dose is increased to five minims of a five-per-cent solution with great benefit, but the writer has hesitated in increasing the strength of the silver for fear of producing abscess.

Salicylate of Methyl in Gonorrheal Epididymitis.

Dr. Bettmann, of Heidelberg, writing to the *Munchener Medicinische Wochenschrift*, recommends the application of a solution of salicylate of methyl with olive oil in gonorrheal epididymitis. A piece of cotton-wool moistened with the above solution is put on the scrotum and covered with caoutchouc tissue. This bandage may be left for twelve hours before being changed. The swelling generally decreases, and in particular the pain is very soon relieved.

Mercurial Ointment in Erysipelas.

Dematters (*Gazz. degli Ospedalli Clin.*, October, 1899) reports a series of eight cases of this affection treated by mercurial ointment either alone or diluted with vaselin. The writer says that his success

was remarkable. He found it of great value not only in the more or less stationary cases, but in those where the disease had a tendency to spread in other parts; even in gangrenous erysipelas it controls the extension of the disease. The author says that in all probability the efficacy of this remedy is due to its bactericidal action.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Treatment of Squint in Children.

Priestly Smith (*Archives of Ophthalmology*, November, 1899) had studied 576 cases of squint, and was able in 347 cases to determine the time at which the squint began. He concludes that it begins usually at a very early age, and therefore the treatment is generally undertaken too late. The results are better the earlier treatment is begun. In most of his cases the children began to squint in the third year. In sixty-eight per cent of all cases treatment was begun a year or more after the first symptoms appeared. This disposition to wait in cases of squint is explained by the fact that many cases recover spontaneously, and by the generally accepted idea that an operation is always required.

Loss of fixation is only found in unilateral constant squint. It appeared 250 times in the author's cases—*i.e.*, in nearly one-half of all cases there was false fixation. This is found especially in those cases which come on in the first two years of life, and is rarer in cases developing later. It is almost constantly absent in cases developing after the sixth year. Loss of normal fixation is therefore a secondary and not a primary symptom. Normal fixation develops in the first year of life, and is lost the more readily the shorter time it has existed. The amblyopia is probably associated with the imperfect development of the faculty of vision in the squinting eye. This matter is hard to determine, however, since we cannot measure the vision of the new-born.

In ninety-six patients orthoptic treatment was undertaken before the fourth year. It cannot be denied that covering the non-squinting eye is often of great benefit. Among the patients with false fixation five regained normal fixation after wearing correcting glasses. In one of these children complete binocular vision had been gained. The older the patient the more difficult is it to restore normal fixation. The treatment therefore must be begun early.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Puerperal Insanity.

Wm. Hirsch (*Medical Record*, Jan. 6, 1900) brings forth some important points in regard to the relation of child-bearing to mental diseases. The author says a specific form of mental disease which might be called puerperal insanity does not exist. The different psychoses which are observed during one of the stages of gestation are the same as those we see in other patients. Pregnancy may under certain conditions be one of the etiological stages of insanity. Its etiological importance, however, is proved by neither statistics nor clinical observers. It is therefore not permissible to terminate pregnancy on account of the psychoses unless there are specific indications for such intervention. During parturition we sometimes meet a transitory disturbance of consciousness, the clinical features of which represent psychical epilepsy. Psychoses which occur in connection with the active parturition are produced: (*a*) by trauma in cases of difficult labor; (*b*) by anemia and exhaustion after severe hemorrhage; (*c*) by intoxication or uremia. The principal symptom of this group of psychoses consists of an acute delirium, which either leads to recovery after a short time or passes into secondary psychosis. All these cases may be produced by the same causes in the non-pregnant state. The clinical features have nothing specific in this way. Lactation, as such, plays no rôle at all in the production of insanity. It is due to other circumstances that during the first few months after delivery women on the average are more predisposed to nervous and mental diseases than under the ordinary conditions.

Adherent Placenta.

From a careful review of German authorities on the subject of manual extraction of the adherent placenta, Hofmeier, of Würzburg (*Munch. Med. Woch.*, November, 1899, p. 1601), concludes with Zweifel that if the afterbirth has not become detached and expelled within three to four hours after childbirth, we should no longer expect spontaneous delivery, and recommends earnest efforts at expression by Crédé's method, conducted with or without the help of anesthesia, to be followed if necessary by manual delivery.

He further emphasizes the necessity of accurately measuring the

amount of blood lost between childbirth and intervention, for which purpose he suggests, after Winckel, the use of a clean dish or bowl to be passed under the patient. Hofmeier holds manual intervention indicated in all cases when the patient has lost from two to three pints of blood with the afterbirth still *in utero*.

Sudden Death Post-coitum.

Gumprecht, of Jena (*Deutsche Med. Woch.*, Nov. 9, 1899, p. 743), reports a case of sudden death occurring in a woman thirty-two years old, close upon and seemingly due to sexual intercourse. The post-mortem examination showed a hemorrhagic focus of the size of a walnut in the substance of the pons varolii. A small degree of arteriosclerosis and a chronic pyosalpinx, which could have had no influence in producing death, were the only other findings.

Diet of Nursing Women.

Pletzner (*Munch. Med. Woch.*, No. 46, p. 1529), from analyses reported by various authorities, concludes that increase of proteid constituents in the diet of nursing women induces a correlative increase of fat and albuminoids contained in the milk, and suggests that especially among the poor—whose limited means do not allow of procuring the more expensive proteid alimentation—albuminoids be supplied on the side.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

A Case of Pure Psychical Epilepsy.

In the *Journal of Nervous and Mental Diseases* for June, 1899, Dr. J. N. Henry recounts an interesting case of this rather rare condition.

The patient was forty-three years old, a widower. His mother had died of Bright's disease, but the family history was otherwise negative. He himself had had several attacks of difficult breathing, swollen feet, accelerated pulse, etc., the urine showing albumin and light granular and hyaline casts. He had also slight hemorrhages from mouth and gums. This condition had improved greatly under treatment. The patient gave his physician a strange account of his conduct following a feeling of stupor and heaviness, when he displayed great irritability

and felt much nauseated. He had been taken at 6 P.M. to within two blocks of the doctor's office, and his next recollection was of finding himself at 2 A.M. in an open lot on the outskirts of the city, climbing a fence to board a car. This he did, but was carried far beyond his home, relapsing again into unconsciousness. This experience was repeated, and he found himself aimlessly walking about two miles from home. He then walked home, where he arrived utterly exhausted.

A week later a second attack began similarly, but he was able to dress and go out to dinner, remembered being laughed at for trying to eat soup with a fork, and only recovered consciousness on a sofa some two hours after dinner, when he asked to be taken to the doctor's office.

In less than a week a third attack occurred, during which he lost his watch and chain and scarf-pin, kicked over bicycles and stamped on them, and was finally arrested trying to enter a car from the fender through the front window. He displayed great violence.

No signs of alcoholism attended any attack. Under treatment he had no attacks from June 3, 1898, to January 3, 1899, when he was lost track of. Alcoholic excesses had been present up to within three years of these attacks. Consciousness would recur for an instant occasionally during the attacks.

The Teaching of Psychiatry.

In the *American Journal of Insanity* for October, 1899, is published an able plea by Dr. Henry M. Hurd, formerly of this State, for the more thoughtful and exact teaching of psychiatry. Its scientific importance and relations are too little realized, and he points out that a knowledge of neurology and its methods of study, while of value, can serve only as an introduction to the proper study of mental disease.

Teaching from a good text-book or carefully prepared lectures is advocated, to be supplemented by sufficient clinical demonstrations to make clear the principles taught.

The frequent absence from large medical centers of any suitable institution for the care of the insane could be obviated by the establishment in such cities of detention hospitals to which all cases of acute insanity could be committed and their observation afford excellent clinical demonstrations.

Dr. Hurd believes, too, that every large hospital should have an out-patient department in which insane patients should be treated by alienists rather than by neurologists, and that this would be distinctly

to the advantage not only of medical students, but more especially of many neurasthenic, anemic, or melancholic cases, who by the early observation and proper treatment at the most hopeful times might be restored to health. Aside from this the alienist too seldom sees many mental diseases in their earlier stages.

The student, having become familiar with the earlier forms of the ordinary insanities, should have the opportunity to know their terminal forms in large institutions for the insane.

The training of teachers and experts should extend far beyond this. It is a hopeful sign that our medical colleges show an awakening to the need of improved courses in these lines.

Mental Contagion and Infection.

Dr. Richard Dewey presents, in the *American Journal of Insanity* for October, 1899, some interesting remarks on this subject. "It is literally true," he says, "that certain mental and nervous diseases are the result of toxins of bacterial or other origin, and that there are specific infections capable of causing insanity directly or indirectly," but he invites attention rather to those nervous diseases like hysteria and chorea, which may spread from one sufferer to several. Epidemics of this sort of infection are not infrequent in history. Mesmerism, spiritism, Christian science, osteopathy, are excellent examples, while to a lesser extent hysteria and ecstasy have run rife in boarding-schools and monasteries. Hysterical patients in asylums frequently infect others, and delusions have been reproduced in other patients in many instances. The restriction of reproduction by the degenerate is greatly to be desired as a preventive measure; the survival of the fittest is to be sought; and educational measures are never to be lost sight of. "The well-equipped hospital for the acute and curable insane, the separation of the epileptic, the criminal, the alcoholic cases, and the deeply demented"—these are measures greatly to be desired and beginning to be much appreciated.

In this connection it is interesting to note that in the hospital now building at the Northern Michigan Asylum it is hoped to receive and treat all acute and curable cases, keeping them separate from the chronic cases, and so lessening the danger of possible infection.

Infantile Spinal Paralysis and Spinal Diseases of Later Life.

In the May, 1899, number of the *Journal of Nervous and Mental Diseases* Dr. Wm. Hirsch discusses the relation between poliomyelitis anterior of early life and the spinal lesion of later years, and reports a case in which by autopsy he was able to confirm his diagnosis as to

the site of the lesion, its nature, and the probable relation to the lesion of early life. Nine cases have been recorded suggesting such relationship, but no autopsy.

The patient was forty-five years of age, a tailor, denying history of syphilis, and presenting only a negative family history; twice married, having two healthy children. He was perfectly well up to three years before observation, when an increasing stiffness and weakness of the left leg came upon him. The right leg was later affected, and both became useless. Atrophy of the right deltoid and supra- and infraspinatus well marked, and some reaction of degeneration. Knee-jerks exaggerated and double ankle clonus. A marked atrophy of muscles of left shoulder and upper arm was noted, the deltoid having nearly disappeared. This led to the history, not previously told, of a spinal disease at two years, leaving the left upper extremity thus impaired.

Dr. Hirsch maintained that the clinical history found the origin of the later pathological process in the scar of the earlier lesion, and this the autopsy seemed to thoroughly confirm.

Alcoholic Neuritis in a Child.

The June, 1899, number of the *Journal of Nervous and Mental Diseases* records a case presented to the New York Neurological Society by Dr. Geo. W. Jacoby, which emphasizes the cumulative effect of small doses of a poison long continued.

The patient, a boy four and a half years old, had been well up to four weeks previous to being first seen, when he had severe colic without vomiting or constipation. The left knee-joint became swollen. An unsteadiness of gait was noticed eight days before he was first seen. Examination showed an extensor paralysis of the hands and legs, with a reaction of degeneration of all the muscles. The extensors of the thighs were unaffected; no sensory disturbances. It was found that the boy had taken, since six months of age, from a half to one tumblerful of beer daily.

An investigation among schoolchildren of a large German city showed that of one hundred children, sixteen drank no milk, twenty-five per cent had never tasted brandy but had habitually drunk beer or wine, and eight per cent had received their regular daily potion of brandy to "make them strong."

THE MEDICAL AGE

VOL. XVIII. DETROIT, FEBRUARY 10, 1900. No. 3.

ORIGINAL CONTRIBUTIONS.

THE RELATION OF DIGESTIVE DISTURBANCES TO GYNECOLOGY AND OBSTETRICS.

BY A. L. BENEDICT, M.D.,

Professor of Physiology and Digestive Diseases, Dental Department, University of Buffalo; Special Consultant in Medicine, Buffalo Hospital of the Sisters of Charity.

At the last meeting of the American Academy of Medicine the subject of specialism was discussed, and while the general sentiment was very favorable, there was an undertone that expressed the conviction that the specialist was incapable of looking at disease save to classify it in his own limited field. Yet it was significant that every specialist who read a paper or discussed emphasized the absolute necessity of preliminary experience in general medicine, and that the shortest duration of this preliminary practice was set at five years by the specialists, and at only three years by some of the general practitioners. The cases to be reported are intended to show how that branch of medicine that deals with physical and chemical problems arising mainly within the abdomen may be of assistance in cases ascribable to the pelvis of the female, and, conversely, how gynecology may be of aid to gastroenterology.

Just at the brink which separates abdomen from pelvis, and sometimes encroaching on the latter, is found apparently the most useless and certainly the most insidiously dangerous organ of the body.

Last summer I was recalled from a vacation to see patient No. 1, Mrs. F——, aged twenty-eight, married about eight years, never pregnant, suffering with what had been variously diagnosed as scolecitis or some inflammatory disease of the adnexa. It is not always easy or possible to discriminate between these two conditions, at least not early. Such a case (No. 2) I saw several years ago. It later passed into skilful hands for operation, and the condition proved to be one

of scolecitis, from which a good surgical recovery was made. I say *surgical*, because neither my protracted attention to the stomach and intestine, prior to the development of acute symptoms in the region of the appendix, nor the radical operation, nor the subsequent treatment by good physicians, has sufficed to make the patient a healthy young woman. The patient's trouble was, however, located below the appendix, either in the tube or ovary. On account of the marked leucocytosis which was present, I urged immediate operation as a safeguard against more serious general sepsis. The gynecologist, however, yielded to the patient's objections, and the case recovered under local and systemic treatment.

Case 3 was that of a woman who died of pyemia following a well-performed operation on account of a large, burrowing, postappendiceal abscess. Three days' time had been lost during my attendance because the symptoms and results of palpation pointed as clearly as possible to the gall-bladder. As soon as the point of local tenderness began to work down toward the appendix I suggested immediate operation, but the surgical consultant counseled delay for three days longer. The examination of the blood was delayed on account of menstruation, which by itself would cause some leucocytosis. When made, it showed a leucocytosis far greater than could be caused by any amount of hemorrhage of any kind, so far as my experience and reading go.

The fourth patient, Mrs. W——, a sister of the last, had apparently a well-marked scolecitis, with moderate temperature, pulse, and leucocytosis. The board-like condition of the right side of the abdomen prevented accurate palpation—in fact, too careful palpation is to be avoided in all acute cases. Major Smith agreed with me as to the probable diagnosis and recommendation of immediate operation. That evening, however, Dr. Frederick saw the case, and on account of the diminution of muscular rigidity he was able to eliminate the appendix and incriminate the tube or ovary, and advised against operation, the patient recovering under expectant treatment.

These cases are cited particularly to call attention to the fact that the same degree of leucocytosis that peremptorily demands operation for scolecitis is a less urgent indication in the case of the adnexa. None of the cases, by the way, presented extreme temperature or pulse, all being within the old "danger line." Ten years ago it was pointed out as a peculiarity of gynecologic sepsis that the temperature might be low and yet the condition be dangerous, as indicated by a rapid and feeble pulse. Some five years ago the same fact was announced as a novelty concerning the appendix. Perhaps, in five years more, when brain surgery becomes more frequent, some

surgeon in that line will make the same discovery; and at length, let us hope, the profession will learn to generalize and apply the same rule to all forms of sepsis.

To return to the matter of leucocytosis, it may be remembered that last year I raised the question on the occasion of the visit of a distinguished abdominal surgeon, and was disappointed to find how little practical use was made of this method in gynecologic cases. Very recently Head has published an article on "Leucocytosis as a Diagnostic Feature of Scolecitis" (*Medical Dial*, September, 1899), and I have seen a similar article in regard to gynecologic cases. It is greatly to be regretted that so valuable an aid has been neglected. The reason why the prognosis of appendiceal and tubo-ovarian sepsis, giving the same leucocytosis and not subjected to operation, differs so widely is twofold. In the first place, the walls of the pelvic structures are more substantial and contain less inflammable lymphoid tissue than the appendix. Thus, penetration to the peritoneum, which is the great danger so far as mortality is concerned, is much less apt to happen. Again, many cases of tubo-ovarian pus date back to a gonorrheal infection, and the gonococcus, after long residence in an abscess, loses most of its virulence or dies out altogether. Even if the germ in question is not the gonococcus, but one of the ordinary pyogenic bacteria, its virulence is, on the average, far less than that of the bacillus coli communis, which is the principal, perhaps almost the sole, active germ in scolecitis.

Cases 5 and 6 are illustrations that the specialist does not invariably act on the principle that "all is fish that comes to his net." Both were characterized by vomiting, supposed to be intrinsically of gastric origin when first seen in consultation, but after careful consideration the diagnosis of vomiting of pregnancy was made. In justice to the attendants it should be stated that they clearly recognized this possibility, but took pains not to present it to me, in order to obtain an unbiased opinion.

Case 5 was that of a young girl who absolutely denied the possibility of pregnancy. She had not menstruated for two months, but had previously been somewhat irregular and gave the history of a slight show of blood at one of the missed menstruations. Thus the menstrual history was not reliable in either way. The increased size of the uterus was made out rather by rectal than vaginal touch. No uterine contraction and relaxation could be felt, but the swelling of the body of the uterus was quite distinct. Of still greater diagnostic value was the character of the breasts and nipples. It is a curious illustration of feminine psychics that the patient persisted in denying pregnancy, though not at all offended at the diagnosis made. She

subsequently aborted, but I am unable to give her history in detail.

Case 6 was that of a married woman of forty, who had borne several children. She had vomited many times daily for a couple of weeks, and had not menstruated for six or seven weeks. She had vomited a little blood, and the gastric condition was serious enough, by itself, to warrant the diagnosis of hyperemesis gravidarum, in case the tentative diagnosis of pregnancy should be verified. Bismuth in large doses, with antiseptics and sedatives, was prescribed, but as it did no good the stomach was washed out and sprayed with menthol in pure petroleum. The danger of incarceration of the retrodisplaced uterus was pointed out. Some weeks later the treatment was repeated, the diagnosis of pregnancy and of beginning incarceration being now more definitely made. I have subsequently learned that the patient aborted and died of some complication, her general depression due to the hyperemesis undoubtedly predisposing.

Case 7 was one of moderate gastric catarrh due to cardiac dilatation with mitral obstruction. A peculiar, fusiform tumor was felt in the right inguinal region, and on questioning I learned that the patient had some endometritis following an abortion, for which she was soon to be curetted. The next week she aborted again, the curettage, I believe, having been indefinitely postponed. The inguinal tumor disappeared after the abortion. I did not make a vaginal examination, and I must confess to being unable to explain the occurrence of the inguinal tumor and its relation to the pregnancy. The gynecologist did not accept my explanation that the tumor was a pregnant cornate uterus. On the other hand, he stated that the uterus was in its ordinary position, by vaginal touch.

Case 8 is cited as an illustration of what we so often forget, that two or more diseases may exist independently. The patient, aged forty-eight, had been married since her sixteenth year, without ever becoming pregnant, and was still menstruating regularly. Physically she presented no abnormality except a fibroid of the uterus, extending up into the left lumbar region, as a stick, eight inches long and three wide. She had known of its presence for eleven years, and four years ago the uterine arteries had been tied in the vain hope of diminishing its size. Her gastric trouble consisted of deficient hydrochloric acid secretion and sluggishness of the stomach and bowels. With all allowance for the influence of reflexes, it does not seem that the tumor had much to do with the temporary condition of the alimentary canal. The patient had also suffered much from sick-headache till relieved by glasses, except that the headaches recurred at the menstrual epochs. This seems to me a refutation, if one is needed, of the absurd

claim that sick-headache is always due to eye-strain. The patient was practically cured, so far as the stomach was concerned, and was advised to have the tumor removed, on general precautionary principles rather than because it was immediately troublesome.

Case 9 was a sad case of inguinal fecal fistula, following an operation for pelvic abscess, apparently not gonorrheal in origin. The patient, who was a poor working girl, was unable to obtain employment on account of the disgusting odor. She claimed that the operator had made light of her condition and had assured her that it would heal spontaneously, refusing further attendance on the case. This, however, must have been one of the false impressions that the laity sometimes get or give of their professional relations with physicians. The patient was treated at the Sisters' Hospital for some weeks with local applications, antiseptic injections, etc., and the communication of the fistula with the rectum was established. She left the hospital uncured, not being willing to submit to radical plastic operation.

Case 10 was that of an elderly female drunkard who had complete uterine prolapse complicated by the appearance of a large cervical ulcer, for which I twice summoned counsel, thinking that malignant disease was beginning. Afterward, some seven years ago, I operated for hemorrhoids, which did not recur. Five years ago she had cerebral apoplexy. Since then she has nearly recovered from the paralysis, but has occasional bleedings apparently from the esophagus, and has once shown quite typical indications of scurvy. Whether the esophageal hemorrhage is ultimately derived from the stomach or not I do not know. The liver is only slightly contracted, and I do not think that the bleeding is due to varicose veins caused by portal obstruction. It is interesting to speculate on the possible connection between the cervical ulcer, the hemorrhoids, the cerebral and esophageal hemorrhage, and the scurvy.

Without citing cases by number I want to allude to a danger of conservatism in pelvic operations, to which my attention is occasionally called as consultant in abdominal cases. Quite frequently a second celiotomy is necessitated by the development of disease, usually of the nature of ovarian abscess or adenoma or of circumuterine cancer, on account of the hesitation of the original operator to sacrifice a remaining suspicious ovary or to do a panhysterectomy, the thought being to avoid completely unsexing the patient. With due regard to the social and religious principle involved, I cannot help feeling that, with some conscientious operators, the pendulum has swung too far from the indiscriminate -ectomies of a decade ago, when the motto seemed to be, "While there is life there is a chance to operate," and

that the future health of many women is endangered by laying too great stress on the possibility of child-bearing.

Case 11 was that of a young woman who, notwithstanding aortic regugitation and mitral obstruction, with considerable enlargement of the heart, underwent three serious abdominal operations. On November 28, 1895, her round ligaments were shortened. Six months later ventral fixation was performed. Her principal complaint after this was of almost constant pain and tenderness on pressure in the region of the kidneys, especially the left. At one time I thought I could feel a solid tumor in this region, at another it seemed that the tumor was the distended sigmoid, a view corroborated by the fact that later, even under anesthesia, no tumor was palpable. The stomach was normal in area, both by auscultatory percussion and by the original *x* ray method, carried out in July, 1897, and reported in *Medicine* for February, 1898. It never seemed to me that her kidneys were movable, but the gynecologist who attended her subsequently made the diagnosis of movable left kidney and stitched it into place. Later the pain returned, and he sent her to me with the idea that the kidney had again become movable, but it was in normal position. Only a few months ago the patient again consulted me about the renal pain, for which I have never been able to account, and which has been relieved only temporarily, though nearly every diagnostic and therapeutic art has been brought to bear on the case, the blood and urine being perfectly normal. Are such cases hysteric? Many men would so consider them, but in my opinion a patient otherwise sensible and tractable does not suffer pain unless there is some cause for it. Hysteria is not a defensible diagnosis unless there is some definite manifestation of cussedness, or unless there is an acute nervous disturbance depending on grief, fatigue, or excitement. Not to mention a concealed calculus or small tumor, it seems probable that this case of renal pain is due to circulatory disturbance, causing undue pressure on the renal nerves.

Cases 12 to 18 presented the vague uterine symptoms which Dr. Goodell has so well portrayed as counterfeits of pelvic disease. In all seven, however, the stomach was either sluggish in its motor function, dilated, or prolapsed. Improvement followed attention to the motor function of the stomach, with usually stimulation of intestinal peristalsis. Case 19 was an aggravated one of the class, the patient being a physician. She presented a marked illustration of gastroptosis, as shown both by auscultatory percussion and the diaphane. In this connection it may be said that my experience is to the effect that general splanchnoptosis is a very rare condition—in fact, I have never

seen a typical case. Case 20, which came the nearest to it, showed a sagging of the stomach to the umbilicus, with corresponding depression of the lesser curvature, a descent of the right kidney, and a slight hepatic prolapse. Although the woman had borne six children, her pelvic organs were reported normal in position, illustrating my claim that ptosis of one organ does not predispose to ptosis of others to any marked degree. Case 21 is another illustration. She was an Italian, aged forty, who had borne seven or eight children. She had cancer of the cervix uteri, which was removed by panhysterectomy, with no return after two years, Dr. Congdon operating. She had a dilated, not a prolapsed, stomach, a left femoral hernia, and both kidneys were movable in the second degree.

Case 22 was one of chronic constipation with subacidity and sluggish motor function of the stomach. The condition was chronic, and I had been summoned on account of an exacerbation. A large pelvic mass was discovered and was referred to Dr. Frederick, who drained through the vagina a considerable abscess. Afterward the case was treated for the bowel and stomach trouble, but with only partial success, as the patient was unwilling to persist, summoning me only occasionally when the symptom became worse.

Case 23 was that of a very fat woman, aged forty. Nine years ago I operated successfully for cystocele. Three years later she bore her second child and suffered a moderate increase of a cervical laceration. Two years ago she had some sort of uterine operation performed by a double-barreled specialist who also does general practice. Following this she suffered from what seemed in retrospect to be septic fever. At my advice she consulted Dr. Frederick, who decided to curette and repair the cervical laceration. Being in no condition for immediate operation, she was kept for about a month on thyroid extract and heart tonics, mainly strychnine. Even under anesthesia the fat prevented a thorough examination. Barring the obesity, the patient remains quite well after two years and is using a bicycle.

Case 24 was one of mild atonic dyspepsia in a young woman. During treatment I was hastily summoned and found the patient in a state of epileptiform hysteria, with various local spasms, apparent unconsciousness, and anesthetic over large areas of skin. The nervous state was due to ungratified passion. It is interesting to note that this attack was followed by marked recrudescence of the digestive symptoms, and I am inclined to think that similar though often less conspicuous cases are quite common.

Case 25 was that of a young woman in Dr. Howell's service at the Sisters' Hospital. Curettage had been performed on account of dys-

menorrhea, and the case had been referred to me on account of persistent vomiting. The heart, stomach, appendix, colon, liver, and left kidney and spleen were normal by physical examination. The right kidney was movable in the first degree. After some temporizing a test meal of 5 grammes of butter, 50 grammes of bread, and 250 grammes of water was given. The stomach contents one hour later amounted to 60 cubic centimeters, the total acidity was 67 deg., free HCl by dimethyl-amido azo-benzol 15 deg., combined HCl by alizarin 16 deg. There was no lactic acid, no soluble starch, a trace of erythrodextrin and sugar. The quantitative estimate of proteids by the writer's method was normal. In short, while some particulars failed to reach the theoretic normal standard, there was no evidence whatever of digestive disease, and the case was referred back to the gynecologist.

Case 26, referred by Dr. L. Bradley Dorr, was very similar, except that there was some lack of HCl. These cases represent a fairly common type. The trouble occurs in women of slender build, is met with early in adult life, though it may persist into any age, there is no organic disease, nor are the patients hysteric in the ordinary sense. Inspection reveals a naturally slender waist, not constricted by corsets; the lower part of the thorax and the entire abdomen are both slender and shallow, although the pelvis may be normal and the limbs fairly well developed. I can explain such cases of continued misery and lack of vigor only on the hypothesis that the visceral cavities and the nutritive viscera themselves are too small to nourish the body sufficiently. Movable kidney is rather apt to occur in such cases. It was present in one of those cited.

Case 27 was one of subacute gastroenteritis, producing alarming symptoms at night. The exciting causes had been indiscretion in diet and fatigue from working in the hot, damp air of a laundry. The usual treatment was employed, except that no morphine was administered, and I discovered that part of the inferior abdominal pain might be referred to a pelvic exudate, for which the patient was referred to Dr. Hanley.

These twenty-seven cases, mostly from private practice and gathered within a year, though some of the histories extend much further back, are not of value for systematic study, but serve to call attention to the necessity for cooperation between specialties and between specialty and general practice. Two lines of cases, illustrating vomiting of pregnancy and movable kidneys, have been excluded, the former having occupied the attention of the Academy recently, the latter being reserved for a subsequent systematic paper.

GUNSHOT WOUNDS OF THE ABDOMEN.

BY J. B. MURFREE, M.D., MURFREESBORO, TENN.

This is a class of wounds that are specially interesting to surgeons, not only from the fact that they are of frequent occurrence, but more particularly because they are so frequently fatal. For a great many years a gunshot wound of the abdomen, as a general rule, was fatal. Occasionally a case would recover, but it was quite rare; the rule was that they died. They also form an interesting group of wounds which have engaged the attention and care of surgeons many centuries, and many efforts have been made, by treatment, to reduce the mortality; and a certain amount of success has attended these efforts, for while gunshot wounds of the abdomen have a large mortality, yet the percentage has been greatly reduced by the mode of treatment introduced within the last few years.

A gunshot wound of the abdomen may be defined as a penetrating wound produced by an explosive missile. Most usually the missile is a leaden bullet driven by the force of a firearm—some form of a gun. For the present consideration I will limit my subject to abdominal injuries produced by a bullet from a gun or pistol. The usual cause of these injuries is the explosions produced by firearms, when the leaden missile is driven into the cavity of the abdomen with more or less force.

Very frequently the wound produced is limited to the abdominal walls, and the cavity is not penetrated. Such wounds need not engage our attention, as they are simply like flesh wounds in other parts of the body, and their treatment and management are alike. But the gunshot wounds of the abdomen which penetrate the cavity are entirely different and form the most dangerous as well as the most troublesome wounds the surgeon has to deal with. They are of frequent occurrence in civil life, while in the military they are the chief wounds met with. A gunshot wound of the abdomen which penetrates the cavity necessarily wounds the peritoneum, and may likewise injure some of the solid viscera. Hence, these wounds naturally divide themselves into two classes. One class embraces those which only enter the cavity, wounding the peritoneum, passing out on the opposite side, or lodging in the abdomen, without injuring any of the viscera. The other class of abdominal wounds includes those which, while they penetrate the cavity, wounding the peritoneum, yet at the same time injure some of the abdominal organs.

The first class constitutes serious wounds indeed, but not so much

so as the second class, because in the latter we have, in addition to the injury of the peritoneum, injury of the intestines or some other organ of the abdomen. A simple penetrating gunshot wound of the abdomen is a very serious injury, attended with considerable danger to the life of the patient. Yet it is frequently followed by recovery without any active surgical interference. But a penetrating wound of the abdomen, complicated by injury to the intestinal tract, or by any visceral injury, with few exceptions proves fatal, unless this termination is prevented by the timely treatment of the visceral lesions by operative interference. A bullet which passes through the lower part of the abdomen, from side to side, or obliquely, is almost sure to produce from four to fourteen perforations of the intestines, while absence of dangerous visceral wounds may be inferred with some degree of probability if it crosses the abdominal cavity in an anteroposterior direction at or a little above the umbilical level.

The general symptoms of a gunshot wound of the abdomen are usually not well marked nor distinctive. There are certain general symptoms which indicate that the abdominal cavity has been penetrated, but these are not always trustworthy, from the fact that sometimes they are absent, and again the same train of symptoms may be produced by a mere penetrating wound. Still there are certain symptoms which are usually present, and although they may be produced by other causes, yet in the main they are indicative of a gunshot wound penetrating the abdomen.

In the examination of a gunshot wound of the abdomen we must carefully note the course of the ball, for here it is not often deflected, as it very frequently is in some other parts of the body. A line drawn from the point of entrance to the point of exit will usually indicate the tissues pierced by the ball, and the organs injured. A ball passing through the abdomen laterally—that is, from side to side—almost necessarily perforates the bowels in several places, from four to fourteen places; while, on the contrary, one passing anteroposteriorly about or above the umbilicus will in all probability produce no visceral perforation.

There are certain trains of general symptoms which indicate a penetrating wound of the abdomen. Shock is usually present to a greater or less extent, yet it gives but little indication of the presence or magnitude of injury done to the viscera. Again, a severe shock may be produced by a non-penetrating wound, and may be absent, or but slight, in cases of intestinal perforation. A patient who has received a penetrating wound of the abdomen, with multiple perforation of the intestines, may exhibit no symptoms of any great shock, yet in general he would. The experience of observers tends to show that when there

is great shock, it is associated with hemorrhage. Vomiting is present in the majority of cases, but it is an unreliable symptom, as it occurs as frequently in wounds of the abdominal walls as it does in penetrating wounds or in wounds of the viscera. Vomiting of blood indicates wounds of the stomach. Faintness and loss of color are present in all penetrating wounds of the abdomen, and are very pronounced when there is severe intestinal hemorrhage. Pain is considered by most writers as unreliable and misleading, but a late writer makes the statement that "the most constant symptom that we have observed has been pain referred to the umbilicus. We have never seen a case of penetrating gunshot wound of the abdomen in which this symptom was absent, and of such importance have we learned to regard it that in cases in which the bullet entered between the ribs, and the diagnosis was therefore somewhat doubtful, its presence or absence has determined our plan of treatment."

The heart's action is depressed, as shown by the slow and compressible pulse, but there is nothing characteristic in the qualities of the pulse, either of the extent or severity of the wound.

Hemorrhage is the result of the extent of the injury, and is in proportion to the damage done to the large organs, as the kidneys, spleen, liver, or vessels, and when profuse soon gives rise to acute anemia, which is progressive, and is indicated by a small and frequent pulse, cold, clammy skin, nausea, and syncope. Among the local symptoms we have external bleeding, which is usually slight, and when free is of no significance. When the bleeding has caused an accumulation in the peritoneal cavity, it can be recognized by physical signs, percussion and palpation. The escape of the contents of intestines or stomach through the external wound is rare, yet when it does occur is positive proof of the wounding of the gastrointestinal canal, and the character of the escaping material will indicate what part of this tract has been injured. The diagnosis can usually be made from the symptoms presented, but in any case where a doubt is entertained a probe should be introduced into the wound and an incision made directly across the wound, down to the peritoneum. The probe should only be used as a guide to the knife, and more for the purpose of tracing the ball. By enlarging the external wound down to the peritoneum we can certainly determine whether the bullet has entered the abdominal cavity or not. As to the extent of the injury done to the abdominal organs, we can only estimate by the direction of the ball and the general symptoms presented in each case, with any special feature that may be exhibited.

The prognosis is always bad; for gunshot wounds of the abdomen must always be regarded as of the utmost seriousness. In considering

the probability of recovery we must consider carefully the nature, extent, and character of the wound. A wound of the abdominal parietes, while serious and painful, does not usually jeopardize the life of the patient, and the prognosis is favorable.

Penetrating wounds of the abdominal cavity, without visceral injury, while constituting a more serious wound than the non-penetrating, are not necessarily fatal. A large proportion of such cases recover without any operative interference, provided nothing of a septic nature has been carried into the abdominal cavity. Gunshot wounds of the abdominal cavity, with injury to the intestinal tract or any of the solid organs, constitute the most dangerous class of wounds we have to deal with. Without prompt surgical interference they are almost always surely fatal, death being the result of profuse hemorrhage or a septic peritonitis. When a large blood-vessel has been injured, or one of the large vascular organs of the abdomen, the hemorrhage is profuse, and death quickly ensues. When there is an escape of fecal matter into the peritoneal cavity, peritonitis rapidly ensues and death quickly results. There is a bare possibility that even recovery may follow so desperate an injury as the perforation of the stomach or intestines. Inflammatory action with the effusion of lymph may cause adhesions with adjacent serous surfaces, and thus shut off the general peritoneal cavity. But this event is too rare and the contingency too remote to cut a figure in our calculations in making a prognosis.

The treatment of gunshot wounds of the abdomen requires as much skill and science as, perhaps more than, any class of injuries the surgeon is ever called upon to deal with. And he who treats these wounds must be well trained in abdominal surgery, and even then he will have the mortification of seeing more than half the cases he treats die.

A non-penetrating wound must receive our careful attention, but does not require a treatment different from gunshot wounds of the soft parts elsewhere. The main idea of their treatment is asepsis; carefully bring the torn edges together when granulation begins. The ball, if found, should be removed, but no needless search ought to be made for it.

In gunshot wounds where the bullet penetrates the abdominal cavity, whether any of the viscera are wounded or not, our most earnest consideration in their management and treatment is demanded.

Where the wound is made by a large ball, and the omentum or some part of the viscera protrudes, then our duty is to thoroughly cleanse the part and make diligent search for further injury, which must be repaired in an aseptic manner, and all gently returned to the abdominal cavity, and the incision neatly closed.

But in penetrating wounds of the abdomen there is very often not only a doubt as to the ball having entered the cavity, but also as to wounding some of the viscera. In the treatment of these wounds, where there is uncertainty as to the extent of injury, there is but one method that is likely to avail much. That treatment consists in cutting down upon the wound and determining whether the ball has entered the cavity or not; if it has penetrated the cavity the rule should be to perform a laparotomy, and search for wounds of the viscera, if there be any. If we knew or could know that any particular penetrating wound of the abdomen did not injure any of the viscera, nor carry any septic material into the cavity, we might be content to treat them aseptically, and await developments. But, unfortunately, we cannot tell definitely whether the bowel or some other viscera is wounded, and if we await symptoms we only imperil what chance there may have been for successful treatment by a laparotomy, and as has been said, he who waits for symptoms in these cases frequently waits to sign a death certificate. It has been pretty well settled by a majority of the leading surgeons that gunshot wounds of the abdomen demand an operation. For in no case can it be definitely determined that there is not any injury of the stomach and bowels large enough to allow the escape of fecal matter, or that one of the solid viscera is not wounded, or that any septic material has not been carried into the cavity.

Very true, a gunshot wound of the abdomen may be recovered from without operative interference, provided there is no injury to any of the viscera, nor any septic matter has been carried into the peritoneal cavity.

But of either one of these conditions we cannot be satisfied, and if we wait for symptoms, when they do appear our patient will be beyond our aid, and operative interference then will be in vain.

So, then, the proper treatment of gunshot wounds of the abdomen, where the cavity has been penetrated, is to lay open the abdomen, search for the injured viscera, and, if found, repair them. It is needless to say that this must be done under and with thorough antisepsis.

The percentage of recoveries with an abdominal incision is so much greater than without operative interference that it is not a question as to whether we should operate, but at what time the operation should be done. The time to operate in a gunshot wound of the abdomen is at once; it is a time for prompt action, and will bear no postponement. If we hesitate and delay, we jeopardize the life of our patient, for his whole well-being depends upon an early and thorough operation. I would be glad to enter fully into the mode of the operation in all its details, and to describe the manner of dealing

with the wounded viscera, whether it be intestine or liver, kidney or spleen, but space will not permit me to traverse that large and interesting field.

The after-treatment of gunshot wounds that have demanded a laparotomy must essentially consist in perfect quietude and the total abstaining from all food. The bowels must be made to rest from their own peristaltic action, and to this end it may be necessary to give a hypodermic of morphine, but this is unfortunate, and when it is possible it is better to dispense with all opiates. No food should be taken by the mouth for forty-eight hours. If nutrition is necessary, it should be administered by the bowel. When all goes well food may be given by the mouth on the third day; then only liquid and no solid food allowed until the end of a week.

CANCER OF THE BREAST.*

BY SAMUEL LLOYD, M.D., NEW YORK.

This is a most appropriate time to discuss the subject of cancer in general. Every one in this audience can recall the time when the etiology of tuberculosis was as vague as that of cancer, and most of us have hoped that the time would come in the not distant future when some one would do for cancer what Koch's discovery of the tubercle bacillus has done for tuberculosis.

I am free to confess that I have for many years declined to accept the embryonic cell theory as a satisfactory explanation of the cause of this disease, and it has been, to my mind, a strong argument in favor of some infectious element that cancer should be on the increase. This increase, too, has been proven to be greater in thickly settled civilized communities than among uncivilized tribes. A friend of mine, who for several years has been a medical missionary in Africa, told me a few days ago that he could recall only one breast cancer in his experience. This is decidedly in contrast to the statistics presented to the last meeting of the New York State Medical Society by Dr. Roswell Park, who said: "In England and Wales, where most careful statistics are kept, the cancer death-rate has risen from 1 to 5646 of population in 1840 to 1 in 1306 of population in 1896—that is, in fifty years the proportion has increased nearly five times." In New York State "in 1887 there were 2363 deaths from cancer and 11,609 from consumption. In 1898 there were 4456 deaths from cancer and only 12,552 from consumption."

Locality seems to have a decided influence in the production of

*Read before the Medical Association of Georgia, 1899.

the disease, and some years ago I collected considerable data bearing on this point in an editorial in the *Annals of Surgery*, and there has been recently an article on this same subject embodying the results of later investigations in several numbers of the *Centralblatt f. Chirurgie.*

Perhaps more startling than this of clinical experience, however, is the almost simultaneous announcement from the New York State Laboratory, from Dr. Armand Ruffer's laboratory, and from Dr. Bra, of Paris, that they have discovered certain bodies in cancer cells which seem to be distinctive of the disease.

Park says that "results obtained already within the past six months have been almost startling or even dramatic, and give promise of great advance in our knowledge in the future. In every case of cancer yet examined where we have had access to the fresh specimens, it has been possible by improvements in technique to find bodies, which cannot be other than parasites, present in vast numbers. These are undoubtedly the same bodies which some observers in time past have called cell degenerations, others fat globules, but which are now quite generally recognized as parasites, though opinion is still divided as to whether they are sporozoa or fungi." He adds that "both cultures and inoculations have been so often successful as to leave no doubt in the minds of those who are doing this work that cancer is unmistakably a parasite—*i.e.*, an infectious disease."

Mr. Plimmer, after his investigations in Ruffer's laboratory, concluded that the organism was a yeast, and his intravenous and intraperitoneal injections in animals, while as yet inconclusive, resulted in "an abundance of new foci," but these are of the connective tissue class, and though named "endotheliomata," the term is only provisional.

More surprising still are Bra's results, for he has advanced further than the other observers. In "six personal observations, which increase the total to twenty-two cases of cancer of the uterus, mamma, ovary, or rectum, or with epithelioma of the tongue or cervix, in which these parasites have been noted in the blood, he has succeeded, in injecting animals with cultures of this fungus, derived from human cancer, in producing tumors with the typic structuré of fibrosarcoma and carcinoma." He also found that cultures "from these experimental tumors constantly proved to be cultures of the parasite."

Accepting these statements, together with the clinical data already published, we find the dawn of a new era in the management of cancer. If cancer is infectious its spread may be controlled by proper sanitary precautions, and if it is autoinfectious the surgeon must adopt measures to prevent the inoculation of surrounding tissues during his

operative manipulations. Probably most of our errors have been made through neglect of these precautions, and the improved statistics of later years have resulted from more complete removal of infected areas and in earlier recognition and extirpation of the disease.

Ashurst has said in his Encyclopedia of Surgery, published in 1884, that the removal of a cancerous breast cannot be considered a very satisfactory proceeding as regards its results in curing the disease; and Agnew claims that he never cured a cancer of the breast, and only operated for the mental relief it afforded and for the temporary relief of pain and discomfort.

The Paris Academy of Medicine, however, in a discussion of this subject, showed that about twenty per cent or more of the cases operated upon were cured. Perhaps this is not surprising, however, when it is considered that it is only within the past few years that the removal of anything save the affected mamma was advocated, except in those cases where the axillary glands were incontestably enlarged. Even then the fat around the breast and between the breast and axillary space was allowed to remain.

In a paper read before the German Congress of Surgeons in Berlin in 1889, Heidenhain demonstrated the fact that the ligaments of the breast are often surrounded by projections of the parenchyma of the gland and contain cancer cells. This is true in regard to the so-named ligaments of Sir Astley Cooper, as well as those which are retromammary and which bind the breast to the fascia.

It seems strange now, with our knowledge, incomplete though it is, of the lymphatics of the breast and the mammary region, and of the spread of cancer, together with the improvement in the statistics of the operation following more radical removal, that Gross should ever have been compelled to urge the complete removal of the breast as a *sine qua non* to prevent recurrence. It is also strange that the profession did not earlier recognize the importance of Cooper's statement in his Lectures on Surgery in 1839, when he said: "The scirrhous tumor is not all of the disease, there are roots which extend to a considerable distance; and those who gave the disease the name of cancer probably knew more of its nature than we are disposed to give them credit for. It is supposed by some that this name was given on account of the surrounding veins. I should rather say it was from the appearance on dissection than from anything without. Where you dissect a scirrhous tumor you see a number of roots proceeding from a considerable distance, and if you remove the tumor only and not the roots there will be little advantage from the operation."

Up to 1889, when Heidenhain published his paper, the conviction

had been growing that successful results were to be expected only after Volkmann's operation, which included a careful cleaning out of the axilla and the removal of the whole breast. The main argument against so complete an operation was based on the chance of a vastly increased mortality, but it was soon proved that the mortality following the operation was decreasing instead of increasing. Individual surgeons showed a great difference in the percentage of deaths, however. Thus Gross reported 10 per cent, Oldekop 9 per cent, Lord Lister 8 per cent, Butlin 7 per cent, Billroth's clinic 23 per cent, Fischer's clinic 20 per cent, Esmarch's clinic 10 per cent, Küster's clinic 14 per cent.

Later Billroth published another list of operations reducing his mortality to 15 per cent, and later still out of sixty-eight operations he had a mortality of but six per cent. Dennis in 1891 published a list of seventy-one operations with a death-rate of only 1.4 per cent, by far the lowest ever reported, and yet he was doing a very complete operation at that time. My own percentage is also less than two.

With the mortality reduced to this low figure, there could be no argument based upon sound scientific data to prevent the thorough removal of the breast and axillary glands; so that the profession were prepared for Halsted's and Meyer's papers, which appeared in 1894, advocating a complete and radical departure from all previous methods and showing results that had hardly been anticipated even by the most optimistic advocates of the operative treatment of cancer of the breast.

The question now resolves itself into one of statistics—that is, a prohibitory mortality having been eliminated, recurrence and its prevention become the important elements to be considered, no matter how extensive, within the limits of safety, the operation has to be.

Here the anatomical arrangement of the lymphatics and perivascular sheaths becomes important, for the growth of cancer is invariably along the lines of least resistance—that is, usually along the adjacent lymphatics and perivascular sheaths. Küster has found these structures distended with cancer cells.

Volkmann took advantage of this fact when he proposed his operation. He claimed that carcinoma may be adherent to the muscular fascia, and even lie on the muscle itself, and yet not involve the muscle. Heidenhain, Ludwig, and Schweigger-Seidel proved the fact conclusively, however, when they described the course of the lymphatics. They found that there was a network of lymphatics on the upper surfaces of both muscles and fascia, and that the direction of the lymphatic current was from the muscle toward the fascia, not in the opposite direction. Volkmann, however, always removed the fascia

of the pectoralis major, because he repeatedly found when he had not expected it that the fascia was already carcinomatous, whereas the muscle was certainly not involved. In such cases a thick layer of apparently healthy fat separated the carcinoma from the pectoral muscle, and yet the cancerous growth, in places demonstrable only with the microscope, had shot its roots along the fibrous septa down between the fat lobules and had reached and spread itself out in flat islands in the fascia. It seemed to him, therefore, that the fascia served for a time as a barrier, and was able to bring to a halt the spreading growth of the carcinoma.

Heidenhain also said he was firmly convinced that carcinoma when it had made its way into the lymphatic channels—and this it had usually done by the time it comes under observation—had sent its outposts down to the surface of the muscle itself, no matter how much fat intervened between the breast and the muscle. "A tumor, however freely movable on the underlying parts, invariably had advanced up to the surface of the muscle."

Halsted, Curtis, and others have tabulated the percentage of recurrence in cancer of the breast, which shows a range from eighty-five per cent in Billroth's cases in 1867 to six per cent in Halsted's in 1894. This shows very conclusively that the best results have followed the most radical operations.

From the time I began to operate I performed the Volkmann operation, and I had one patient, operated upon in 1885, who lived seven years without recurrence. She died of pneumonia in 1892. After Heidenhain's paper I made it a habit to remove the whole of the pectoralis major except the clavicular portion, and following the papers by Halsted and Meyer I extended this to complete removal of the pectoralis major and the other structures advocated by those operators. I have one patient, or at least only one I can trace, who is now in the tenth year of freedom from recurrence following the incomplete removal of the pectoralis major.

Within the last few years the importance of the complete or radical operation has been forced upon me more strongly than ever. It is frequently the case in my experience that the axillary lymphatics do not seem to be involved, and yet after the pectoralis minor has been cut through and the infraclavicular glands and fat exposed it is very evident that they are infiltrated. In these cases any operation short of a careful exposure of the whole infraclavicular region would have left definite areas of infection, and this probably accounts for the number of cases where we have observed that the recurrence came just under the clavicle.

It is hard to explain why these glands should be distinctly

enlarged and cancerous, unless there is a frequent anomaly in the arrangement of the lymph channels from the breast. Ordinarily the lymphatics on the upper and lower surfaces of the breast empty into three lymph vessels for each set, and these unite in emptying into the axillary ganglion. It is possible, however, that one or both of these sets of vessels turn under the outer margins of the pectorales instead of in the axillary region. If this is true, and my experience leads me to believe that it is true, then any operation short of a complete cleaning out of the infraclavicular space is incomplete, and will almost certainly result in a prompt recurrence.

If we accept the theory advanced in the beginning of this paper that cancer is due to a parasite, and is infectious, then it is probably from an autoinfection that many of the recurrences result. If we do believe this, then in my opinion the Halsted technique is incorrect, for if we operate upon the breast first and then attack the axilla, the necessary manipulation of the detached breast must press the parasite onward through the lymphatic vessels to uninfected regions. In order to avoid this the operation should be reversed. Cut off first the abundant lymphatic current running from the breast and the surrounding tissues to the root of the neck.

In order to do this we should begin in the axilla with an incision running along the anterior border of the axillary space and along the humeral margin of the pectoralis major until, by reflecting the skin, with only enough fat not to disturb its nutrition, we can expose the whole axillary space. The axillary vein is then exposed at the apex of the axillary triangle and the fat and glands carefully dissected away from it. As soon as the margin of the pectoralis is reached the skin over the muscle is dissected upward until the humeral attachment is exposed. This is then cut away close to the humerus, and the skin incision is carried down to make the upper incision for the removal of the breast. This upper skin flap is then dissected upward and inward until the sternal and clavicular attachments of the pectoralis major muscle are exposed. The clavicular attachments are then cut away and all the fat and fascia lying under the pectoralis minor is taken up with it, while this muscle is drawn down, the skin flap is drawn up, and the pectoralis minor cut through at about its middle. The upper portion of the muscle is then drawn up with the skin flap, and the fat and glands and fascia connected with the axilla and in the infraclavicular space are dissected away. The posterior portion of the axilla is then cleared away, taking care to save, if possible, the subscapular nerves. The lower skin incision is then made, and the whole mass of glands, muscles, fat, breast, and fasciæ is removed *en masse*. It may be well, if the patient's condition is still good, to clean out the supraclavicular

glands, but in order to do this the operation should not be prolonged beyond the limit of safety. Some operators have advocated an immediate skin graft, but that also takes some time and adds to the shock of an already extensive operative procedure. This is made necessary because of the large amount of skin that all operators believe should be removed with the growth. I am convinced, however, that it is better to draw the skin together as much as possible by means of sutures, even though some sloughing of flaps does result, because the remaining ulcer is much reduced in size by that procedure. It then becomes a simple matter to do a secondary skin graft two or three weeks later if it is necessary. Drainage should always be employed in the axillary space and also in the infraclavicular space, as the removal of so much tissue leaves hollows that are sure to fill up with serum and blood, which will otherwise have to be evacuated.

Before uniting the skin the pectoralis minor muscle is united by sutures. The after usefulness of the arm is but little curtailed by this operation. It is remarkable how well patients can get along without the pectoral muscle, but they must be encouraged to exercise the arm freely as soon as the wound is sufficiently healed. In closing the skin care should be taken not to have any tension on the skin in the axilla, in order to avoid cicatricial contraction and pressure upon the axillary vessels.

In my opinion every tumor of the breast should be removed as soon as possible, and time should not be wasted in vain attempts to absorb it. If there is reason to believe that the growth is benign, it may be cut into first, and then the operator may determine whether it is suspicious or not. But every suspicious tumor of the breast should lead to a complete extirpation of the breast at once. Age is no protection from cancer, and we should not forget that it may appear in early as well as in late life.

I have operated for cancer, and the pathological report has sustained the diagnosis, in a woman of twenty-six, and in several between that age and thirty.

If cancer is infectious we should warn the patient of that fact, and all dressings and everything coming in contact with the disease should be destroyed by fire.

The University of Lyons has just received a legacy of 50,000 francs, the income to be used for a quinquennial prize for a native of Lyons who shall by his work render service to hygiene, public health, and medicine.

CORRESPONDENCE.

THE MICHIGAN STATE BOARD OF REGISTRATION.

To the Editor of THE MEDICAL AGE:

My time has been so much occupied with matters of more immediate import that I have not replied sooner to a communication from Dr. E. S. Richardson, of Reed City, in your December 10 number, criticizing the methods of the Board of Registration in Medicine. I may say in passing that I had some correspondence with Dr. Richardson last November regarding the production of his diploma or corroborative evidence of its possession by him. At first he absolutely refused either to send his diploma or other evidence of its possession, and expressed a very great desire to go into court over the matter. I did not reply to the Doctor, as I sized the thing up as corns, or bunions, or old age, or something of that kind, and I suspected he wished to convey his malady to me by suggestion. Besides, I knew he would realize that "discretion was the better part of valor" if left alone, and so he did, for he shortly afterwards sent me the proof required, with rather a lame apology for doing so considering the warlike attitude he had assumed at the beginning of our little differences. However, I must congratulate Dr. Richardson upon the good sense he displayed in regard to this matter of the right of the board to demand corroborative evidence of the truth of his affidavit under the old law, even though late in doing so; but I cannot extend this congratulation to the communication I am about to answer, nor to the reasons he had for publishing it. I may be wrong, and I trust I am, but it seems to me that the Doctor, having "fallen down" in his attempt to "bluff" the board, adopts this means of encouraging some weak brother to take the legal steps he had not the courage to follow himself.

With regard to Dr. Richardson's contention that the board has no legal right to demand corroborative evidence as to the truth of affidavits made under the medical act of 1883, Section 3, Subdivision 1, of the Act of 1899 says: "The applicant shall be registered and given a certificate of registration if he shall present sufficient proof within six months after the passage of this act of his having already been legally registered under act number one hundred sixty-seven," etc.

As the author of this particular subdivision, it was my intention to give authority to the board to judicially review the registration made under the old act, and I consulted several of the leading attorneys of

the State regarding the wording of this subdivision in order to cover the point named, with the result of the wording of the above subdivision.

It is not even necessary to emphasize the "sufficient proof" or "legally registered" in order to give the board power to demand corroborative evidence of the truth of affidavits under the old act. The subdivision could have read, "The applicant shall be registered and given a certificate of registration if he shall have been registered under act number one hundred sixty-seven of eighteen hundred eighty-three," and still the board would have had the power to demand diplomas or other evidence of legal registration. Dr. Richardson does not appreciate the fact that registration under the old law was simply a *ministerial* act as opposed to a judicial act under the present law, and that the board is a judicial body empowered by law to administer oaths and take testimony and adjudge thereon, and that courts have always refused to interfere or review a decision given by a judicial body of this character provided certain rules of investigation have been adhered to.

Under the old law county clerks as ministerial officers were obliged to receive affidavits for registration if certain forms were complied with. It was left for a justice court to inquire into their legality upon request of prosecuting attorneys. Under the new law the board is not only the ministerial officer but the justice court as well, and if the new law had simply stated that those physicians who were registered under the old act should be reregistered, the board would not only have assumed the ministerial or county clerk function but the judicial or justice court function, as they do now. When the law said registered, it, of course, assumed legal registration, and legal registration meant not only that the form laid down should be complied with, but that the qualification exacted by law should also be an integral part of the registration. Examples: John Smith complies with the form and states in his affidavit that he is a graduate of the University of Michigan, whereas he has never graduated from any college. George Jones complies with the form and in his affidavit states that he is a graduate of the Michigan Clairvoyant Society, a society not empowered by law to grant medical diplomas.

There are dozens of cases of the above character of registrations under the old law. Are the above John Smith and George Jones registered under the laws of 1883? They have complied with the form, paid their fees, and received from the county clerk a certified copy of such registration, and are now applying for reregistration under the new act. According to Dr. Richardson, of Reed City, they are legally registered, and the board should reregister them under the

new act. He does not seem to catch the idea as to what registration means in law. It means something more than *form;* it must have *fact* as well as form. And if the board has the legal right (which it has) to go behind the form of John Smith's and George Jones's registration and adjudge of the fact in connection therewith, it also has the power to investigate the fact and form of all the registrations under the act of 1883. It cannot make "fish of one and flesh of another." And what more natural evidence of fact can there be in connection with an affidavit which states that the qualification for registration is graduation from a "legally authorized medical college" than the evidence of the college named in the affidavit—in other words, the diploma or other evidence of having been granted a diploma of graduation by the college in question?

It seems to me that a diploma has other uses than hanging in an office only. Probably a cigar certificate, "which I hold framed on my wall," as one of my correspondents writes, to be gazed at in wonderment by the unsophisticated, would serve that use of a diploma. The Michigan board is not the only board that demands a diploma. In other States where similar acts have been enacted the diploma plays a very important rôle in registration, and there are any number of Supreme Court decisions bearing upon this right of boards to demand diplomas.

In the case of the "Years of Practice" men, the board demands affidavits from reputable citizens as corroborative evidence of affidavit of registration. The certificate which will be issued by the Board of Registration in Medicine, signed by its officers and members and with the seal of the board attached, would not be of the slightest legal value, except, in addition to the form, it also had fact behind it.

Dr. Richardson writes concerning a physician's vested rights. A physician has no vested rights in law, either in this State or in any one of the United States. It is in the power of the State to cancel any rights or privileges it may have given him. He also asks what right has the board to compel any to submit evidence that convicts themselves. The board does not compel or even ask any one to repeat or to perpetuate the fraud already done. The man who has gone through the form of registering under the old act, and who swears falsely that he has a diploma, is not asked, much less compelled, to produce something he is not possessed of.

When it comes to fees, diplomas are forgotten for the time being and are relegated to the walls of a dusty old office, and the doctor shouts "legalized swindle." I take it from this that he expects the State to pay the bill. Well, perhaps it should. When it pays the expenses of the Barbers' Commission, the Horseshoers' Commission,

and the Cigarmakers' Union, it probably will offer also to pay the expenses of a medical act. There is no question that the medical profession is a huge philanthropic concern with no other motive for existence except the good of mankind. We all have noticed the philanthropic instinct developing in the dissecting-room in our student days. It is this instinct in its rudimentary form that prompts the average student to fill the pockets of the unsuspecting visitor with fingers and toes. It suggests to the senior student the idea of trading a head and neck for an arm and thorax with the freshman, and then in a weak moment to buy the head and neck back again at half price.

This philanthropic instinct is ever present with him after graduation, and prompts him to choose a field where the people are poor, the collections slow, and the fees low. It causes him to arise in the chilly garments of the night at 3 A.M., don his coonskin, and pay a visit several miles from home along a dark and dismal road to a patient who has never been known to pay a doctor, or anybody else for that matter. No thought of pay or hope of reward ever enters his mind; no question as to what the neighbors would say or the patient's friends, who are his clients, if he refused the call, or the effect it would have on his practice and reputation if he refused to go, and another physician was called in. Simply the philanthropic idea pushes him along—the idea that came to him like a thief in the night while in the dissecting-room.

Having this idea so thoroughly incorporated and cultivated in his anatomy, ever present with him in his waking, in his sleeping, and in his eating, bulging out from all sides and on top and bottom, especially when speaking of his fellow practitioner in the same field, it is the most natural thing in the world for him to expect the State to step in and pay for the bill that sends the unfortunate quack out of the field, whose knowledge of philanthropy is measured by the pecuniary sympathy he receives from an unsuspecting public. But, of course, as this rounding up of incompetents and quacks by the State without doubt benefits the public, therefore the competent medical man derives no benefit, either directly or indirectly! Then why should he in Michigan be caused to pay a small percentage of the total amount paid by the physicians of other States under similar acts? Of course, the whole thing is a "legalized swindle," and the profession throughout the State have been protesting for over thirty years against similar legislation.

I can give Dr. Richardson this information. While representing the profession in Michigan before the legislature last winter and advocating the passage of the Chandler Medical Act, the philanthropic idea was not even thought of. The legislators, individually

and collectively, were urged to pass the bill from the standpoint that such legislation was not only of great benefit to the public but to the profession as well, and that the latter were not only willing but eager to assume the financial responsibility of the act. The reason why legislation protecting society and the profession has not been passed years ago in this State is because there have been too many men of the type of Dr. E. S. Richardson in the profession of medicine—men who are ever ready to criticize and to find fault, but who are as silent as death when energy and financial support are required.

I am glad to be able to inform your readers, Mr. Editor, that, with the exception perhaps of half a dozen in the profession in this State, the board has received universal commendation in its acts. The members of the board, as well as myself, are in receipt of hundreds of letters from prominent physicians from all over the State, testifying to the approval of the writers in the board's effort to administer the act fairly and equitably. In this connection I may quote from a letter received from Prof. Victor C. Vaughan, Dean of the Department of Medicine and Surgery, University of Michigan: "I can assure you that the medical faculty will sustain the board in its attempt to purge our profession of quacks of every kind. With one exception all the members of the faculty gladly complied with the *very reasonable requirements* of your board."

B. D. HARISON.

SAULT STE. MARIE, Jan. 15, 1900.

QUEEN AMELIE of Portugal is a real heroine. She is the only crowned head who has acquired by study and real examinations the right to add the letters M.D. to her name. The queen has shown much courage and sympathy for the suffering in connection with the outbreak of the bubonic plague at Lisbon, and was with Dr. Pestana, one of the leading physicians of Portugal, when he succumbed to the disease. The moment Dr. Pestana discovered that he had contracted that terrible malady, the queen went to his bedside, and devoted herself to his care. With astounding courage and force of will the sick man assumed the duty of recording his own symptoms. How important this was may be gathered from the fact that panic is believed to be one of the causes of a fatal result. But Dr. Pestana was calm to the last. His last words to the weeping queen were: "I have only five minutes to live; the tetanic spasms have returned. Adieu, madame. I deeply thank your majesty for having honored my death-bed by your presence. Do not approach me, as my breath is dangerous." He then breathed his last in a sort of convulsion.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

LOCAL MEDICAL SOCIETIES HERE AND THERE.

The verbal reports of cases, and extemporaneous discussions, of the average local medical society, caught on the point of the careworn secretary's stenographic pencil, and reduced to cold writing, do not make a conglomerate mass possessing any profound magnetic attraction, nor offer much solid pabulum for the mind of the searcher after truth. Indeed, it is only after the most skilful revamping on the secretary's part that such copy becomes just innocuously commonplace.

In searching for the causes which make a local medical meeting poor or good, tedious or interesting, it is not necessary to take into account the professional qualifications of the men who chiefly take part in the meeting; for quite often the paper presented by a man of moderate learning, experience, and general attainments calls forth as interesting a discussion as the dissertation of his more learned *confrère.*

The local medical society is the primary from which delegates are sent to State and national societies, and to international congresses; to the younger men it is a training school to fit them for participation in the proceedings of greater societies. It is here they must acquire clearness of thought and expression to enable them suitably to represent local affairs away from home. Deprived, too, of the stimulus of college life and teaching, they must seek here a certain inspiration and stimulus for their study and work. The vital importance of the local meeting to the general development of higher professional acquirements cannot be overestimated. The fact, then, that of the total membership of these societies such a pitiably small percentage makes up the average attendance should stimulate some sort of a change in the character of these meetings that would attract a larger number of men to attend and actively participate in the proceedings.

The lack of organized discussion often dulls the interest of the members in a well written and well presented paper. Too often the discussion wanders bewilderingly from the subject in hand, and the next speaker discusses his predecessor's diversion till essayist and essay are vague and remote. Cases more or less irrelevant, cases of doubtful application to the subject in hand, are dragged in, and lucubrations are introduced that fatigue the mind and slow the listener's heart. A previously organized discussion, arranged for by the essayist and through his personal solicitation, would enliven the proceedings and give them greater pertinency.

Then, too, if medical men would sometimes wear a humbler mien and abase themselves by reporting doubtful diagnoses and results, the monotony of uniform success would be varied, and interesting and valuable counsel could be exchanged. This change could be attained without any loss of dignity or prestige. Aside from possibly medical politics, a man's prestige is increased or decreased by his clientele, and in the local society of members of his own craft he could easily afford to forego any personal advertisement that would diminish the general interest.

The importation frequently of men of talent from neighboring cities is a feature that would excite a greater interest and attendance. Such exchanges of ideas are always productive of good results.

Local medical societies are of such great value to the active practitioner, are so vital to scientific growth and progress, that any changes promoting their attractiveness ought to receive hearty encouragement.

EDITORIAL NOTES.

A Test of Faith.

In Boston a woman sustained a street-car accident whereby her foot was crushed. True to her belief she summoned a Christian scientist, refusing to go to a hospital. The Eddyite arrived but refused to give treatments, advising that the woman be removed to a hospital. This was at least worldly wise. The mistakes of the surgeon can be brought within the scope of law courts; the mistakes of medicine are more apt to be irremediable. Mother Eddy herself advises caution until the race acquires higher faith in her tomfoolery. She says: "Until the advancing age admits the efficacy and supremacy of mind, it is better to leave the adjustment of broken bones and dislocation to the fingers of surgeons, while you confine yourself chiefly to mental reconstruction." Mental reconstruction is certainly a desirable end to achieve.

ITEMS AND NOTES.

THERE appears to be little or no abatement of the plague in the Orient.

THE medical inspection of the Chicago schools has proven a great success.

THERE have occurred twenty-two deaths from plague in Honolulu up to January 29.

TWO deaths from hydrophobia are reported to have occurred at Richmond, Indiana.

THE authorities of the Jefferson Medical College propose a scientific study of hanging.

THE medical staff of the Philadelphia Polyclinic now numbers 150 teachers and assistants.

VESSELS of the French merchant marine are now required by law to carry medical officers.

THERE was opened in the latter part of January at St. Petersburg a female hygienic exposition.

A CHAIR of inter-tropical pathology has been created at Havana and Dr. J. Guiteras appointed to it.

LARGE quantities of condemned tuberculous beef were discovered being sold in Berlin a short time ago.

A NEW monthly, the *Seaboard Medical and Surgical Journal*, Norfolk, Va., began publication last month.

THE osteopaths of Illinois will make an effort to test the medical practice act passed by the last legislature.

THE government will establish a marine hospital for the port of Honolulu on the Island of Oahu, Hawaii.

THE Heidelberg Medical Faculty, induced by government influence, has voted to admit women students.

THE health officer of Cincinnati is preparing for the legislature a bill to compel barbers to sterilize their tools.

THERE are over four hundred names on the reserve list of those anxious to proceed to South Africa as medical men.

PARIS will shortly name a certain street after Eugene Bouchut in honor of his invention of the intubation of the larynx.

A RECENT decree enables the holder of a medical diploma from a foreign university of recognized standing to practice in Brazil.

THE initial number of the *Doctor's Magazine*, edited and published by Dr. Geo. F. Butler, of Chicago, appeared February 1.

DURING the past few weeks an epidemic of influenza has been present to an alarming extent in London and adjacent cities.

AN association has been formed by the physicians of Muncie, Indiana, for the protection of its members against chronic deadbeats.

A CONGRESS ON TUBERCULOSIS will take place at Naples in the spring of this year. It will be under the patronage of the queen of Italy.

IN the near future a tablet to Pasteur will be placed upon the house in Strasburg where he lived when professor at the University of Strasburg in 1853.

PROF. PATRICK GEDDES, of Edinburgh, will deliver a course of lectures on the evolution of sex before the Twentieth Century Club of Boston.

A CHICAGO alderman has proposed a law by which a reward of $200 will be given for the killing of burglars, footpads, etc., by any officer or citizen.

A BILL was recently introduced in the New York legislature providing for the appointment of a staff of consulting physicians for the hospitals for the insane.

A SHORT time ago a large number of employees of the Bellevue Hospital were suddenly taken ill. It was supposed that poisoning was caused by neglecting to cleanse large metallic coffee urns.

A BILL has recently been introduced in the Kentucky legislature providing for an appropriation of $50,000 to establish a colony of epileptics.

THE sum of $2,500,000, by the will of the late R. B. Brigham, of Boston, is to be used for the founding and endowment of a hospital for incurables.

THE oldest member of the medical profession in England, Dr. Swinson, died on New Year's day, a few weeks before completing the one hundredth year of his age.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Chronic Gonorrhea.

L. Casper (*Indian Medical Record*) maintains that no one specific can cure gonorrhea, which presents no single clinical picture and is not a single pathological process, as the urethra is of two portions, in which the posterior, which is the more frequent seat of the disease, tends to be shut off from the influence of injections by the contraction of the compressor muscle. Gonorrhea is a disease produced by the gonococcus; other forms of urethritis may be bacterial or aseptic, the latter resulting from trauma or following a cured gonococcal infection. The therapeutic agents are either chemical or mechanical, or the two may be combined. Of the chemical methods, the author particularly recommends washing out through a small French catheter, introduced at first with the eye as far as the bulb, with solutions such as potassium permanganate 1-in-5000 to 1-in-1000, silver nitrate 1 in-5000 to 1-in-500, perchloride 1-in-20,000 to 1-in-6000, zinc sulphate or permanganate 1-in-5000 to 1-in-1000. When 200 cubic centimeters of the fluid has been injected by means of a syringe attached to the catheter, the latter is drawn out a little, and the process repeated, the meatus being compressed by the fingers to prevent escape. Endoscopic treatment, which is rarely called for, consists in the direct application of a caustic fluid such as chloride of zinc or five-per-cent silver nitrate to a given spot, the focus of the disease. Guyon's instillation method is much more valuable; about ten cubic centimeters of one-half- to two-per-cent silver nitrate solution is injected into the urethra by means of a catheter, which is withdrawn during the process, so that the fluid is applied drop by drop to the whole inner surface. Casper does not find urethral bougies of much use; pure mechanical means, such as smooth metal sounds and dilators, may, however, be of value. He recommends a sound devised by him which is grooved to contain antiseptic ointments, and so acts both chemically and mechanically. Lohnstein has introduced a dilator, which can at the same time be used for irrigation.

Discussing the question as to when a patient may be considered cured of gonorrhea, Casper does not think it is needful to wait till the discharge completely stops, and thinks a sterile discharge or purely aseptic catarrh may be regarded as sufficient guarantee for patients to be allowed to marry, lest they may develop sexual neurasthenia.

A New Traumatic Spinal Disease.

At a recent meeting of the Vienna "Doctoren Collegium," Schlesinger (*Medical Press*, Jan. 3, 1900) repeated his convictions of having discovered a new disease resembling, as he admits, Marie's "spondylose rhizomelique," but not exactly coinciding with it. After rehearsing all the diseases and authors on the subject of traumatic affections of the vertebræ, he made a differential diagnosis of his new disease that many of the members could not accept. Bechterew's disease, he said, differed from his in having a rheumatic origin, while an infection was to be traced to the primary cause of Strumpel's and Marie's cases. In Strumpel's a hereditary tendency with individual disposition could be perceived. Another marked difference in the Strumpel-Marie cases was the progress of the ankylosis from below upward. He would not press this as a constant in the symptoms of the disease, as he had seen cases progressing in the same order.

In the post-mortem room no difference in the "Wirbelversteifung" can be observed. In all the ligaments of the vertebræ ossified, particularly the ligamentum flava and ligamentum apicum. The articulations of the vertebræ are also changed, but if a fresh specimen before maceration be carefully examined, arthritis deformans can easily be diagnosed. He finally admitted that the principal differences in his cases were to be found in the etiology, distribution, and course of the disease.

Stricture of the Pylorus.

Chenieux (*Medical Press*, Jan. 10, 1900) has published an interesting case of stricture of the pylorus cured by operation. The case was that of a young woman suffering from grave disturbance of the gastric functions. Appetite was lost, but no matter what she ate the stomach permitted considerable distention and afterwards emptied itself by vomiting. Food did not pass through the pylorus; milk, although more tolerated, was not completely digested. The patient consequently became emaciated and lost strength rapidly. Her medical attendent sent her to Vichy, but with little benefit, and finally concluded the case was one of stricture of the pylorus, and advised an operation.

The woman was operated upon by Chenieux, who after laying bare the stomach, made an incision perpendicular to the ring of the pylorus an inch and a half long. He drew together the two extremities of the incision, which became thus transversal and parallel to the pyloric ring, and then sutured with fine silk. No liquid flowed into the abdomen, which was closed without drainage.

The result was most satisfactory. The patient one month after the operation was able to well digest her food, while her strength and *embonpoint* returned with surprising rapidity.

Gelatin Solutions in Hemorrhages.

Heymann, of Leipzig (*Munch. Med. Woch.*, No. 34, 1899), reports a case of incoercible hemorrhage occurring after tonsillectomy. Unsuccessful attempts at tamponing were followed by the injection under the skin of the chest of 140 cubic centimeters of a sterilized gelatin solution at 2.5 per cent heated to 40° C. (104° F.). The hemorrhage ceased in forty-five minutes. On removal of the tampon, however, it reappeared, and a further injection of 240 cubic centimeters was required, besides 160 cubic centimeters more on the day following to permanently control the bleeding. The clinical report goes to show that gelatin injections, if not specific, have at least a favorable influence upon hemorrhage.

MEDICINE.

The Limitations and Value of Fluoroscope Examinations.

Absolute accuracy by this method, says C. L. Leonard (*New York Medical Journal*, January 6, 1900), seems hardly possible, since the fallibility of observations of this character has often been proved. The era of instantaneous photography revealed the inability of most of the artists to depict correctly the sequence of motion which they observed.

The skiagraphic method of diagnosis possesses a peculiar advantage over the fluoroscopic in mechanically recording the observation. Accurate comparison with a normal is thus made possible, and the study of the record by different observers and its comparison with subsequent records insure correct deduction and diagnosis.

It is probable that normal and abnormal motion will be registered and studied by series of instantaneous skiagraphs, as it is so commonly depicted in ordinary photographs.

The recent work of Levy-Dorn, in Berlin, in making skiagraphs of the thorax at rest in full inspiration or expiration, is a notable step in this direction.

The greatest future advances in Roentgen-ray diagnosis will be made in the distinction of the less dense tissues and the study of motion by means of skiagraphs. Permanent records will thus be made and data obtained for future reference and study.

The value of the *x*-ray is not in its power to penetrate everything, but in distinguishing between the less dense tissues, and thus enabling us to study organs and viscera that are hidden from ordinary vision. The fluoroscope is incapable of detecting these shades of difference, and does not mechanically register what it shows.

Gangrene Complicated by Glycosuria.

C. S. Wallace (*Lancet*, Dec. 23, 1899) says that for many years medical science looked upon gangrene and other surgical diseases complicated with glycosuria as well-nigh hopeless, and it is only recently that any hope of successful surgical interference has been offered. The writer says that it yet remains to be proved that true gangrene (excluding death from acute specific processes, which may occur in any subjects at any age) occurs in diabetic patients unaccompanied by such arterial disease as would itself produce the gangrene. The glycosuria may or may not precede the gangrene, but is not usually accompanied by other signs of diabetes. Septic wounds may produce a glycosuria which vanishes when the septic process is removed, and individuals suffering from septic processes are often on the border-land of glycosuria. Gangrene may aggravate a preexisting glycosuria. Arterial disease is sometimes that which accompanies or is produced by a chronic renal disease. The writer says that it is yet to be proved that neuritis can produce any gangrene comparable to that of the so-called diabetic gangrene, and that the best chance of recovery is often by removal of the limb near the trunk, and that this measure should be undertaken before the patient is reduced by septic absorption. The presence of glycosuria may be an indication instead of a contraindication for operation.

Thermometric Tides in Tuberculosis.

Barbier (*Soc. Méd. des Hôp.*, Nov. 10, 1899) observes that unless the patient's temperature is taken every two hours—which constitutes the preferable procedure—we should heed those periodic oscillations of the body temperature presenting in consumptive patients. The lowest temperature occurs between 6 and 8 A.M., the maximum between 1 and 3 or 9 and 11 P.M. A knowledge of these facts enabled Barbier to determine that in progressing tuberculosis many so-called apyretic states are in reality accompanied with fever, while with the usual plan of forenoon or afternoon measurement febrile oscillations of utmost importance escape the notice of the physician. The febrile type in tuberculosis may be: (1) intermittent, with or

without hypothermy; (2) remittent, with ample oscillations; (3) continuous—this, however, exceptionally and for a short time only. Rises of temperature occur by day and much oftener at night. In the first instance fever occurs between 8 and 9 A.M., reaching its acme between 10 A.M. and 3 P.M. The nocturnal fever starts between 2 and 6 P.M., with a maximum temperature between 10 P.M. and 4 A.M. This nocturnal rise is of the utmost clinical significance and almost always coincides with a slight diurnal fever, which, however, does not as a rule exceed 99° F.

THERAPEUTICS.

The Cacodylates in Tuberculosis.

A. Gautier (*Progrès Médical*, p. 392, 1899) prefers the cacodylates of sodium or calcium in daily dosage of five to fifteen centigrammes exhibited by the hypodermic method. *Per orem* the medication may produce gastric disturbances, a garlicky taste in the mouth, which is also noticeable on the breath, and sometimes more or less persistent albuminuria. The same untoward effects obtain where cacodylates are administered by the rectum. No drawbacks are noticeable, however, after hypodermic injection of the drug. From experimental research conducted at the Hospital Boucicaut with the help of M. Letulle, Gautier concludes the following formula to be the best:

Sod. cacodylate.....	6 grammes 4 centigrammes.
Carbolated alcohol.....	10 drops.
Distilled water.....	100 grammes.

Heat to the boiling point in a porcelain or silver dish and add enough distilled water to make the original 100 cubic centimeters.

Preserve in sterilized bottle. Each cubic centimeter of the solution corresponds to five centigrammes of pure cacodylic acid—*i.e.*, the mean dosage for twenty-four hours to be injected at one sitting. The doses may be doubled without inconvenience provided one allows the patient eight to ten days of rest, alternating with the same duration of treatment. The medication should be suspended on appearance of congestive tendencies, hemorrhages, spitting of blood, and in female patients during the menstrual period.

The Anesthetic Properties of Nirvanin.

C. A. Elsburg (*New York Medical Journal*, Jan. 13, 1900) says in analyzing some of the products obtained in the synthetic formation of orthoform Einhorn and Hines discovered and described a new substance which they called nirvanin, for which they claim anesthetic

properties. This substance is a white salt, but has no odor; it has a strong, bitter taste, and is very soluble in water. According to Lucksenberger nirvanin is ten times less poisonous than cocaine. It acts as an anesthetic in a ten-per-cent solution. It is very stable.

From the experiments that the author has made with this drug, he sums up his results as follows:

1. Nirvanin has distinct and valuable anesthetic properties when injected into the tissues according to the infiltration method.

2. Nirvanin is ten times less poisonous than cocaine, and more than three times less poisonous than eucaine.

3. It has distinct antiseptic properties; a solution of one per cent or more can be kept as a stock solution and will remain sterile.

4. It is a stable compound and can be boiled a number of times without diminishing to any degree its anesthetic properties.

The Treatment of Diarrhea.

C. O. Molz (*New York Medical Journal*, Jan. 20, 1900) says that in regard to treatment much could be said, but as the treatment depends upon the causes, these must first be determined. In the majority of cases three indications are to be met. The first and most important is the thorough cleansing of the intestinal tract, which is always to be obtained either by small doses of calomel frequently repeated, by castor oil, or by enteroclysis if the cause is determined to be in the lower bowel. Secondly, rest, by abstaining from food for at least twenty-four hours or allowing only easily digestible and non-irritating substances, such as albumin water, peptonized milk, etc. Opium is a harmful drug in the majority of these cases. Thirdly comes correction of improper food, which in children is found to be the most frequent cause of diarrheal conditions. These changes must be made according to indications present.

Vegetarianism in Therapeutics.

Referring to the therapeutic value of a vegetarian diet, Hoffmann, of Leipzig (*Therapie der Gegenwart*, No. 7, 1899), considers it to be advantageous in two classes of disease: (1) in those neuralgic disturbances which occur in hysteria and neurasthenia, and which often exacerbate under animal diet; and (2) in cases of obesity coupled with constipation. Patients are almost always women, and provided their digestive organs are in good condition and they are capable of a certain amount of exercise, they may derive considerable benefit from a course of vegetarian dieting.

Feeding Ovaries in Chlorosis.

Moscucci (*Accad. dei Finocratici di Siena*, 24, 4, 1899) claims to have secured considerable improvement both in the general condition and the blood of chlorotic patients after exhibition of fresh ovarian tissue. Beneficial results were also noticeable in dysmenorrhea.

Electricity in Pruritus.

Legros (*Thèses de Paris*, 1898, 1899) advocates the various forms of franklinization (or static electrization) for the treatment of pruritus, claiming about seventy per cent of cures by this method.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

The Diagnosis of Anterior Abscesses of the Mastoid, and of Furunculosis of the External Auditory Meatus.

At the International Otological Congress, held in London, Dr. Louis Bar, of Nice, France, read a paper on the "Diagnosis of Anterior Abscesses of the Mastoid, and of Furunculosis of the External Auditory Meatus" (*Archives of Otology*, October and December, 1899). He says that otologists are agreed that they sometimes find it difficult, if not impossible, to make a diagnosis between abscess of the limiting cells of the mastoid process and furunculosis of the meatus externus. In such cases a reasonable diagnosis can only be made from deductions drawn from a perfect acquaintance with the anatomy and physiology of the region, and at the same time from the general aspect and progress of the case. The following deductions may be drawn:

1. That lymphangitis and early periauricular adenitis are the rule in all furuncular affections of the meatus, and are late and exceptional in purulent inflammations of the limiting cells. This is consequent on the difference between the lymphatic systems of the external and middle ear.

2. That perimastoid edema effaces the retroauricular depression in furunculosis, whereas in mastoiditis the retroauricular depression persists and remains circumscribed.

3. That the pharyngeal plexus may become visible through venous stasis induced by the mastoiditis.

4. That in consequence of the different innervation of the tympanum and the meatus, spontaneous pains and sensitiveness are

more acute in furunculosis; they are less marked in general than in anterior abscess of the mastoid.

5. That also for neurological reasons, in inflammation of the anterior cells, facial paresis is sometimes observed, an exaggeration of gustatory sensitiveness, and particularly sensitiveness of the pharynx and end of the tongue.

6. That the bacterial nature of the pus is different in the two diseases.

7. That in absence of any febrile condition a continuous disproportion between the pulse and the temperature is in favor of mastoiditis.

The Treatment of Catarrhal Adhesive Processes in the Middle Ear by Injections of Pilocarpine.

Fischenich, of Wiesbaden (*Archives of Otology*), says he used pilocarpine in a twenty-per-cent solution in increasing doses in the various sclerosing processes with or without labyrinthine complications. In 120 cases during the last four years the results have been encouraging, and he urgently recommends this treatment. The remedy must be introduced directly into the drum through the tubes. From thirty to fifty applications are required. He states: (1) At the beginning a certain degree of improvement of hearing is obtained. Then the capacity of the mucous membrane for absorption mostly diminishes. (2) A further improvement of hearing can be obtained by a repetition of the treatment at a later period. (3) After total cessation of all treatment improvement may still be noticed.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

A Peculiar Disease Involving the Nose.

In *The Lancet* of January 6, 1900, Dr. Albert J. Chalmers describes a peculiar disease called "henpuye," or dog nose, a disease frequently met with in the Gold Coast colony and neighboring parts of West Africa. The peculiar nature of the disease seems to have hitherto received very little attention, as the author was unable to find many references to it by earlier writers. "Henpuye" starts in a native of West Africa during or soon after an attack of yaws, in which there is a history of the nasal mucous membrane being attacked and a small bony swelling arising symmetrically on either side of the nose. This swelling, which is generally oval with the long axis directed downward and outward, is attached to the nasal bones, the nasal process of the

superior maxilla, and also to the inferior maxilla in the more advanced cases. It is produced by the deposition of new bone under the periosteum and grows slowly in all directions. It does not affect the mouth, the orbital or nasal cavities, nor the nasal ducts, so far as is known. Pain in the nose is complained of at the commencement of the disease. Later, headache is sometimes felt and pain in the swelling during wet weather. As the growth becomes larger it interferes with the sight by growing up in front of the eyes. In some cases the patient has to bend his head downward in order to be able to see over the top of the swelling. These tumors may remain quite small or may continue to grow for years, giving rise to deformity and interference with the sight, but so far as is known they do not break down or ulcerate.

The author describes at length several cases with numerous full-face and profile illustrations. He has never observed that the administration of iodide of potassium produced any change, the only treatment appearing to be the removal by operation. From portions which he removed *en masse* he obtained numerous specimens for examination. The whole swelling cuts readily with bone forceps and consists of quite soft bone. Microscopical sections showed signs of ossification in membrane proceeding under the periosteum, while the rest appeared like ordinary wide-meshed cancellous bone. The whole process appeared to be that of a slow osteoplastic periostitis. Two views have been advanced as to the origin of this disease: one that it is a racial characteristic, the other that it was started by the larva of some insect. On account of the fact that there is always a history of yaws and of the tumors starting during or just after an attack, and that the patients complain of pain, the writer inclines to believe that the disease is due to an osteoplastic periostitis brought about by absorption of the poison of yaws from the nasal mucous membrane.

Deviation of the Septum.

The current number of the *Laryngoscope* (vol. vii, No. 1), in reviewing an article by Dr. W. B. Shields published in the *Medical Mirror*, states that when the septum is thin and movable, in the author's judgment the Asche operation will be a failure, the deviation returning sooner or later on account of the pliability of the septum; of the numerous operations he thinks Asche's or Hajek's should be preferred. He has seen both Asche and Hajek operate and prefers Hajek's method, because after the incisions are made through the septum its lower incised edge is pushed into the floor of the nasal cavity of the greater size or concavity, the result of which is to obviate any danger of the

deviation recurring in after years, as, it is claimed by many, occurs after the Asche operation. The operation of Hajek is then described, the mode of procedure in the author's opinion being practically the same as in Gleason's operation. In an editorial note the *Laryngoscope* states that Gleason's operation has been fully described by its author in the columns of that journal, and that it appears from Dr. Shields's detailed description of Hajek's method that it is not entitled to be called by the name of the latter, as it differs in no way from Gleason's except that a knife instead of a saw is used.

[The question here of correct nomenclature seems to depend on the question of priority. In the text-book of Moritz Schmidt, edition of 1894, Hajek's operation is described and the latter given credit for it. At that time the majority of German laryngologists called the operation after Hajek, and the instrument-makers had the latter's special knives for the operation for sale in their shops. Moreover the technique of the two operations is not identical, and it would seem better to give both operators due credit.—ED.]

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

SYPHILIS OF THE NERVOUS SYSTEM, AND THE USE AND ABUSE OF MERCURY AND IODINE IN ITS TREATMENT.

In the current number (January 27) of the *Journal of the American Medical Association*, Dr. W. M. Liszynsky discusses some of the difficulties of intracranial syphilis. Even on the discovery of a more or less remote syphilis it does not follow that every nervous manifestation is to be attributed thereto. There is, however, a pretty well defined train of nervous symptoms which are almost always traceable to a previous syphilis. Even when such diagnosis is definitely settled and the cause well established, too optimistic a prognosis should not be given, for roseate prophecies too frequently fail of fulfilment. Early antihectic treatment, while unquestionably desirable, does not by any means exempt from later syphilitic disease of the nervous system, degenerative types of disease frequently appearing in spite of early and vigorous therapeutic measures. The attacks of the specific poison upon the nervous system are commonly characteristic: (*a*) the inflammatory or exudative, involving either an endarteritis with resulting thrombosis or other complications, or a more or less rapidly extending gummatous deposit; and (*b*) the degenerative, involving

trophic interference with specially susceptible cell structures, giving rise to the various post- or parasyphilitic diseases, essentially chronic processes. Those forms most dangerous to life are the obliterative endarteritis and basal meningitis. Points to be borne in mind are the resulting formation of connective tissue and destruction of nerve tissues thereby, as also the results of a thrombotic endarteritis of long standing are not conditions amenable to antispecific treatment. Similarly the rupture of a syphilitic artery produces results which are of course hopelessly beyond the reach of antispecific measures. Recent exudative and inflammatory conditions are those promising most brilliant results. The virulence, the duration, and the character of the symptoms are factors on which results will depend, as also the susceptibility of the patient to mercury and iodine. Inunctions of mercury vigorously pushed and full doses of the iodine in conjunction most quickly give results.

The Nature and Principles of Psychology.

It is for alienists especially that Boris Sidis, in the *American Journal of Insanity* for July, 1899, discusses this subject, but its more careful study on the part of the general practitioner would often stand the thoughtful man in good stead. There is reason for congratulation that "medical men are no longer afraid of everything mental, and that psychology and medical science are no longer so far apart as for centuries they were." Subconscious phenomena, though long rejected, are not new and merit careful scientific investigation. Psychically induced disturbances which are as often psychically cured should no longer serve only as the natural food of quackery. The psychiatrist has been outstripped; the neurologist, who has been too prone to cling to worn-out psychological doctrines, inclined in his pride to ridicule the psychologist. Studies of aphasia on the psychic side have been greatly neglected.

Now it is certainly plain to the medical man who has a good scientific training—and happily the majority of them do have one—that the imagination used as an explanation of the whole field of functional psychosis, the phenomena of hypnosis, the manifestations of the subconscious, and also the methods of psycho-therapeutics based on these phenomena, is simply a term that indicates an abyss of ignorance.

Psychology, and especially that part of it that deals with abnormal mental life, has proved to be practically useful, and philosophy is certainly not dangerous. Philosophy is after all only clear thinking, and is there any reason why medical men should not be clear themselves?

THE MEDICAL AGE

VOL. XVIII. DETROIT, FEBRUARY 25, 1900. No. 4.

ORIGINAL CONTRIBUTIONS.

CHRONIC SUPPURATIVE OTITIS MEDIA.*

BY G. C. EGGERS, M.D.,

President St. Louis Academy of Medical and Surgical Sciences.

This affection of the middle ear is not only the most common as well as the most disagreeable of all aural diseases, but is likewise the most tedious and most resistant to treatment. It causes great impairment of hearing, and on account of the copious discharge, which is usually very offensive, it is an extremely loathsome and disgusting affection, not alone to the afflicted but to their friends as well.

It is asserted by some writers that fully seventy per cent of all ear cases seen by the general practitioner are of this nature. This being a fact, it is of paramount importance that the general practitioner be sufficiently versed in otology to readily recognize this disease in its incipiency or early acute stage, and by proper treatment spare the patient much physical suffering and mental anguish as well.

Of all diseases that of "running ears" is certainly most to be dreaded, for as already stated the odor is sometimes so great that the room occupied by one with this disease is soon filled with the foul odor, so that frequently the afflicted one finds it absolutely necessary to shun all company. On the other hand the process may invade the contiguous structures, as the mastoid cells or brain, and cause death. This is by no means a rare occurrence, as every surgeon and otologist can testify. In many cases of long-standing middle-ear disease the attic and antrum are involved in the suppurative process, the ossicles may become carious, also the surrounding bony walls. Such conditions may exist indefinitely and produce no greater disturbance than to keep up a continual discharge from the ear. However, should

*A paper read before the St. Louis Academy of Medical and Surgical Sciences.

some cause arise to prevent free exit of the pus through the external auditory canal, the pus may find its way into the mastoid, and if allowed to open spontaneously it will do so either through the outer cortex, following which we have a periostitis presenting all external symptoms of mastoid disease, or through the inner cortex, in which case we will have to deal with abscess, meningitis, phlebitis, and thrombosis of the lateral sinus.

Very recently I was called to see a child which had been for more than a week under the care of two very skilful general practitioners for meningitis. That the child presented symptoms of that disease is true — the severe pain, the rolling of the head, etc., would lead one to believe that it was suffering with some meningeal trouble. Upon making an examination of the ear with speculum and reflected light the diagnosis was at once made clear, and instead of meningitis we had confronting us a case of acute otitis media. Under proper treatment all symptoms subsided in a few days; but what the results would have been had not the true condition been detected is plain — either a case of "running ear," mastoiditis, or possibly purulent meningitis would have resulted.

Thus I emphasize that the general practitioner should be sufficiently well versed in otology to recognize this disease early. Especially is this so in infants, where we are usually guided in making diagnoses by the objective symptoms alone. It is not often that the specialist in this line of work is consulted for this affection in its acute stage, but rather for the treatment of the result—notably to check the discharge of a "running ear," the sequel of a poorly managed case of acute otitis media. This is by no means at all times an easy matter, and frequently the otologist's patience is taxed to the extreme before his efforts are finally crowned with success.

Much has been written on the treatment of "running ears," but when it is all simmered down it amounts practically to this, viz., cleanliness and the removal of any necrosed tissue which may exist. Of course, the agents used and the method of application differ. It is true polypi sometimes keep up the discharge, but so far as I have experienced the discharge produced by the presence of polypi is not pus of the same character as we usually meet in these cases, but is rather thin, watery, and seldom offensive.

Frequently cases are met with in which the discharge has existed five, ten, or even twenty years without the least perceptible odor. This class of cases almost invariably are due to the presence of polypi, although not always. Again, cases are met with in which the discharge has existed only a short time, and the odor is the most foul. This may be due to one of several causes. Most often necroses exist,

or the opening in the drumhead is so small and the consistency of the pus is such that there can be no free discharge of the pus. I have in mind a case in point which illustrates how futile it is to attempt the cure of such cases unless the opening in the drumhead is sufficiently large to allow free drainage from the middle ear.

Miss L——, aged thirty-six, consulted me in May, 1899. She had a discharge from both ears which had existed for twenty-nine years, or since she was seven years old, at which age she had scarlet fever. Specialists and general practitioners had treated her with varying results. At no time had the discharge been checked for a longer period than one month. Upon examination I found the auditory canal filled with a stinking discharge which was very tenacious and stringy, requiring no little effort to remove, but this was accomplished by the liberal use of peroxide of hydrogen. When the ears were sufficiently clean to admit of a clear view of the drumheads I found in each a very small perforation through which pus oozed. The condition confronting me was plain; that it was impossible for free drainage to exist through such a small opening was apparent. I increased the size of the perforation so that no difficulty was encountered in making applications beyond the drumhead, and free drainage was at once established. The subsequent treatment was very simple. Every other day an alcoholic solution of boric acid was poured into the ears, the head being tilted so that the fluid would pass through the drum into the middle ear, where it was allowed to remain for a few minutes, and then permitted to run out. The next step in the treatment was politzerization to force out all fluid, then thoroughly mopping out the auditory canal until it was perfectly dry. Finally, insufflating a powder of boric acid and aristol, enough powder to just lightly cover the tympanum and auditory canal being deemed sufficient.

This patient was under treatment less than six weeks, and since then, now nearly eight months, there has been no return of the discharge. That this is a permanent cure there can be no doubt.

I wish to speak of the pernicious custom of packing the ear with boric acid only to condemn it in most positive terms. To lock up the discharge is without doubt very irrational and unscientific, and much mischief can accrue from it.

Many extol the use of iodoform in these cases, but owing to its disagreeable odor I have long since abandoned its use, preferring aristol, which has but a slight odor and is less irritating, and is fully as efficacious.

Very often the canal is filled with granulations and the mucosa thickened and red, occluding the view of the drumhead. The appli-

cation of a solution of cocaine, or better still, a solution of the suprarenal capsule, will so far contract the swollen tissues that a better view of the cavity can be obtained, and the therapeutic agents used can reach the most remote pockets and angles of the tympanic cavity.

THE TUBERCULIN TEST FOR CONSUMPTION: ITS WIDE-REACHING SIGNIFICANCE.

BY H. B. BOULDEN, DETROIT., MICH.

When, a few years ago, from his laboratory in Germany, the scientist, Prof. Robert Koch, announced the discovery of a new product that gave much promise as a cure for tuberculosis, the scientific world was all agog with interest and inquiry. Well it might be so, when we remember that one-seventh of the human race die from tuberculosis; and even more startling than this, it is estimated that one-third of mankind, some time during life, are affected by some form of this disease, so aptly designated "the white plague!"

It has often been found that in scientific research unlooked for phenomena are of as much importance as—yes, even far more than—the expected results. The ancient alchemists, in their blind attempt to transmute base metals into gold, laid the foundation of chemistry. The astrologers, in the early centuries, in seeking to foretell future events by the aspects and situations of the stars, established the substratum of astronomy. Although Koch's first product—the toxin of the tubercle germ—which he termed "tuberculin," has disappointed somewhat the high hopes as a remedial agent which were at first entertained, yet it still has its ardent advocates, and a fact more important than even its curative features is that it has proved a marvelous and signal success as a diagnosticating agent in detecting latent tuberculosis in cattle. It is claimed, moreover, and upon good authority, that with the aid of this agent a diagnosis may be made of human tuberculosis in the incipient stages, and without danger to the patient. The method is simple and easily applied, and with the careful thought and investigation given the subject by reputable bacteriologists the results may yet be far-reaching and important in this field.

After years of careful inquiry and biological research scientists are obtaining results that are gratifying in the extreme. Few problems engaging the time and thought of the laboratory workers are more important than those relating to the germs of tuberculosis and other diseases. With our present data, in addition to the fact that many of the products are as yet in the experimental stage, it would be hazard-

ous to say whether we shall ever, by artificial means, be able to protect the human body against the invasion and spread of the tubercle bacilli; yet in view of the past signal successes in the manufacture of a specific antitoxin so unquestionably efficacious in diphtheria, we may cherish the hope that the discovery of a specific remedy for tuberculosis, which has been the dream of enthusiasts for years, may yet be realized. State and national authorities and individuals are looking to the results from biological experiments with a great degree of interest, and throughout the country are being established public and private laboratories at great expense, where successful work of this kind is prosecuted and encouraged. Some of the most interesting and complete establishments of this nature are those of the New York Board of Health, the Massachusetts Board of Health, that under government control at Washington, the Saranac Laboratory of New York, and the Biological Laboratory of Messrs. Parke, Davis & Co. at Detroit.

As the informed reader is well aware, tuberculosis, like diphtheria, is distinctively a germ disease. The various bacilli are as individual as races of people. They can, by the bacteriologist, be separated from other similar germs, grown on a suitable medium, and kept upon glass slides for examination at the will of the microscopist. This is a great stride in scientific research, in studying and diagnosing (and may we not venture to say, eventually *curing?*) tuberculosis. We thus know our foe, oftentimes its origin, accurately its presence, and so are in a position to seek and discover means with which to combat it intelligently, and we trust in time conquer it successfully.

The first step in obtaining any of these bacteriological products that are at present the occasion of so much interest and experiment is to procure the distinctive germ, and this must be gotten from man or animals having the disease. In the case of tuberculosis, which is one of the most difficult of all pathogenic germs to obtain, the simplest and most expedient mode of procedure is to procure it from the sputum of a consumptive. Upon examination of this the microscope may at once reveal the tubercle bacillus. Then an animal, such as a guinea-pig or rabbit, is inoculated with small portions of the expectoration. If the germ is of sufficient virulence death will result from tuberculosis within the course of a few months. The diseased organs of the dead animal, such as lymphatic glands, bits of tissue, etc., containing the bacilli are obtained. These portions of tuberculous tissue are transferred on sterilized platinum wires to the surface of culture media in tubes, and these are placed in an incubator, kept at the body temperature, and allowed to remain for some time in order that the germs may multiply. A portion of these germs is once more

taken from the tubes and examined microscopically to see that no other germ is present.

Having thus obtained the separate and distinctive tubercle bacilli, a number of them are, under aseptic precautions, transferred to flasks of specially prepared beef bouillon, which are placed in the incubator. These germs, under the favorable conditions stated, multiply, all the while developing a poison which goes into solution in the bouillon. Tuberculin is the result of this, and the original product of Koch consisted of this fluid containing the tubercle poison evaporated to one-tenth its volume, and filtered in order to separate it from the germs.

Antitubercle serum has nothing in common with the foregoing, and must be distinguished from it. It is the blood-serum of an animal treated by a process very similar to that employed in the production of diphtheria antitoxin. The tubercle virus or toxin (tuberculin) is injected into the horse in progressively increasing doses for a period extending over several months' time. During this interval the animal develops an enormous power of resistance, and when the latter is at its height the blood is drawn off in suitable tubes, which are placed in the refrigerator. After some days the red blood-corpuscles and serum separate; the pale, straw-colored layer at the top of the container is the antitubercle serum, utilized with more or less success in the treatment of tuberculosis. Of the therapeutic properties of this, together with those of the preparations that Klebs and other scientists have discovered, notably the two new forms of tuberculin presented by Koch, called "Tuberculin O" and "Tuberculin R," we are not in a position to make a statement, as they are considered by many to be as yet only experimentally employed.

In the modern well equipped laboratory every precaution known to science is observed to prevent infection with the germs. All the glassware employed is first sterilized by heat—the hands of the operators are always rendered aseptic by suitable disinfectants. In the animal rooms can be seen hundreds of guinea-pigs and rabbits which are to be used in the experimental work with the poisons and their curative serums. Experience has demonstrated the fact that deductions made from animals which have been inoculated with the toxins very generally apply to human beings, and so these little creatures are made martyrs to the cause of humanity.

Conversant now with the fact that tuberculosis is one of the most prevalent and deadly of all communicable diseases, that its germ can be isolated, handled, and investigated, let us turn to the subject to be especially considered in this paper: How to detect and check the malady. There are three ways—two applying to man and one to ani-

mals—of finding whether or not the suspected subject has consumption: First, examination of the sputum by aid of the microscope; secondly, inoculation of guinea-pigs with the suspected sputum to see if in time it produces tuberculosis. Both of these methods are tedious, however, and often considerable time must elapse before a satisfactory and accurate diagnosis can be made. Thanks to science and to the untiring labors of Professor Koch and his *confrères*, where the first two methods fail, or where there is no sputum or other discharge available for examination, there is one method left, viz., the injection into the animal of tuberculin, which has proven an almost infallible test for diagnosing consumption in animals; and by the use of this agent science seems to have discovered a means of establishing a diagnosis before the tubercular disease has passed beyond the primary stage, a marvelous advance thus being made tending toward the reduction of the ravages of the worst disease afflicting humanity.

An eminent scientist says of the use of tuberculin: "The phenomenal feature and effect of the fluid when injected hypodermically is in selecting the hidden seat of the disease and causing local congestion therein, while at the same time producing constitutional disturbances, such as fever, malaise, and muscular pains, all of which soon disappear. No effect follows in the great majority of persons and animals when tuberculosis is absent."

Well may we ask, What are the sources of consumption? One of the most prolific of these is the use of milk and meat from diseased cattle, and as will be shown in statistical references given later in this paper, the number of animals which are seemingly healthy, but which are in fact tuberculous, is surprisingly great, and may well cause mankind to ponder over the awful risk daily taken—a risk which, however, can in great measure be avoided by proper means.

It has been well and truthfully said that "the cow is the wet-nurse of consumption," and so not only to the consumer of milk and meat, but to the farmers and dairymen, is the subject of bovine tuberculosis fraught with untold interest. When life itself is endangered and at stake, no means should be left untested and untried to put about it any safeguard that science can devise. Individual interest and personal "rights," so-called, should be subservient to the common weal; and those who may be called upon to sacrifice a portion of their property for the protection of the remainder and for the general good should do so philosophically, and instead of proving an impediment to scientific test and research, lend a helping hand in the work of protecting the health of the community. As a matter of fact, in such States as Michigan, where the law does not compel the application of a tuberculin test, many farmers and dairymen are found who are not

only willing but eager to have their herds examined and the tuberculous animals put to death. Though the first cost falls upon them, they have the satisfaction of knowing that the disease is checked, that the cattle which remain are rescued from one of the greatest dangers that can threaten the health and value of this species of property, and that the well-being of the community has been advanced. The States which by law require the slaughter of animals shown to be tuberculous by means of the tuberculin test provide a suitable compensation to the owner.

Let our people be once awakened to the importance of this subject, let them be brought face to face with the fact that freedom from dread consumption can be obtained in a great measure by using pure milk and meat, and they will arise in their might, as they have done whenever they have fully realized any impending danger, and, for the sake of protecting home and loved ones against a deadly foe, they will demand that these products which they use be obtained from sources that are free from this dread disease! It is claimed that tuberculin, the laboratory product, in careful and experienced hands, *will detect tuberculosis in cattle when no other known method of diagnosis yields any result;* and further, that all ordinary methods of milk inspection are inefficient and inadequate—the only way to be sure that the seeds of tuberculosis are not in the milk is to be sure that no tuberculous cows contribute to the supply.

Investigators, eminent commissions, sanitary congresses, and veterinary associations have given careful thought to the investigation and checking of consumption in animals. In the past, in order to do this, the complete freedom of a given herd of cattle from tuberculous infection could only be established, in a great majority of cases, by killing the animals. Now, it is possible with this new means to determine the latent tuberculosis by the hypodermic administration of tuberculin. If the animal is healthy, no reaction follows; if infected, the temperature rises appreciably. So reliable has this test proven, so often has its searching and penetrating power been established by post-mortem examination of slaughtered animals, that its diagnostic value is now one of the settled facts of veterinary and sanitary science. The application of the tuberculin test has proved so accurate in diagnosing the disease in this country that not long since, at a meeting held in Buffalo, the United States Veterinary Medical Association was led to adopt the following resolutions:

"First, that tuberculosis of man and cattle is identical. Second, that the milk from cows with tuberculous udders may cause tuberculosis in animals fed upon it. Third, that the milk from cows with extensive tuberculosis, but apparently healthy udders, may, in some

cases, contain the germ of tuberculosis, and cause the disease in animals fed upon it. Fourth, that in some cases the germs of tuberculosis appear in the milk of tuberculous cows that are not far advanced in the disease, and of others that are healthy, so far as can be determined by an examination made during the life of the animal. Fifth, slightly tuberculous cows sometimes succumb to the sudden exacerbation of tuberculosis and furnish virulent milk for a period before it is possible to discover their condition by means of physical examination. Sixth, *tuberculin* furnishes incomparably the best means of recognizing tuberculosis in the living animal. Seventh, tuberculin, properly used for diagnostic purposes, is entirely harmless to healthy cattle and is so exceedingly accurate in its effects that the few errors resulting from its use cannot affect the general results, and are of less frequent occurrence than following the use of any other method of diagnosing internal diseases. And in view of the prevalence of bovine tuberculosis in foreign countries and the measures taken by some of them to protect their cattle from infection, the United States should prohibit the importation of breeding animals until they have been proven by the tuberculin test to be free from the disease."

Prof. J. L. Hills and Dr. F. A. Rich, of the Vermont Agricultural Experiment Station, make the statement that "human tuberculosis infects the lower animals, and what is vastly more important, and the central fact, bovine tuberculosis infects man." They cite numerous cases in support of the transmissibility of tuberculosis to human beings via cow's milk, and their testimony is supported by that of other physicians in different parts of the country. It is not reasonable to expect that this testimony should have the exactness of biological experiment; the development of tuberculosis is simply observed to be coincident with the ingestion of milk from tuberculous cows, and in the absence apparently of any other etiological factor.

But biological experiments have been made. Henry L. Shumway, in his Handbook on Tuberculosis Among Cattle, a work to which we are indebted for many of the citations presented in this article, states that in a Vermont herd of ninety-one cows, seventy-eight reacted to the tuberculin test; and that many of the swine fed on the skim-milk from this dairy were found as tuberculous as were the cows. On another Vermont farm where the disease is located, over sixty cows, over one hundred hogs, all the chickens, the dog, and even the family cat, were exterminated on account of the disease, and were proved tuberculous by autopsy.

As to the identity of tuberculosis in man and in cattle, Dr. Irving A. Watson, President of the New Hampshire State Board of Health,

says: "It has been proven that pulmonary consumption in the human family, and tuberculosis in animals, are precisely the same disease." A number of eminent scientists who made a report to the International Veterinary Congress at Brussels, in September, 1883, state that all the evidence favors this view. If these are correct in their opinions, the communicability of tuberculosis from animals to man, or *vice versa*, would seem to be an unobjectionable theory, to say the least; for it is no longer disputed that tuberculosis is communicable between man and man, or between animal and animal—that is to say, whenever, in the transition, it can preserve and perpetuate itself as a distinct process having certain well-defined characteristics of its own, which differentiate it from other processes that may in a general way resemble it. Furthermore, as we have seen, this transmission may occur, at least among the lower animals, by means of the ingestion of milk or blood. What wonder then that the occurrence of tuberculosis in bottle-fed babies should excite the suspicion that the milk is the cause of the trouble? And when it is discovered, as it has been in numerous instances, that the cows supplying the milk are suffering from tuberculosis, the chain of evidence is almost complete.

Is the tubercle germ present in the milk from tuberculous cattle? The microscope sometimes reveals it, but in many cases fails—not because the milk is pure, but because such a small quantity of it, say one one-thousandth of a drop, can in any case be observed in the field of the most powerful microscope. Experiments conducted upon cattle in Kankakee and Elgin counties, Illinois, illustrate the extreme difficulty of detecting the microorganism of tuberculosis in tuberculous milk; in at least five cases rabbits inoculated with milk from suspected cows developed tubercular lesions, while specimens of milk from the same cows gave negative results under the microscope. The bacilli are present in the milk, but not abundant; this, however, is no guarantee that they are innocuous, for it has been demonstrated that in a dilution of 1 to 400,000 they will increase and multiply the moment their environment becomes favorable.

It would seem that if the bacilli can get into the milk, the toxin can get into the blood. Professor Law, of the Cornell University Agricultural Experiment Station, says: "This bacterial secretion pervades the entire muscular tissue of a tuberculous animal, and may be taken into the human system whenever the meat of such an animal is used for food." Whether the disease can be thus communicated is a problem not yet fully worked out. The results of experiments with hogs, which developed tuberculosis on a diet of corn-meal and bovine blood, would seem to indicate that it can.

The Illinois Board of Live Stock Commissioners recently tested

with tuberculin 182 head of cattle at Kankakee Asylum; over forty reacted. Of the cattle at Elgin Asylum forty-one per cent reacted. The reacting animals were all slaughtered, and autopsy showed tuberculosis in every one. Says Dr. Grange, recently State Veterinarian of Michigan: "After having used tuberculin in about a thousand instances, the impression produced upon my mind accords with the statement of Professor Law—that those who have used it most are loudest in its praise."

Professor Leonard Pearson, of the Veterinary Department of the University of Pennsylvania, writes: "In my experience of more than five hundred cases, of which about one hundred have been slaughtered, I can count but one error in diagnosis—an old cow, badly diseased, which did not react after a small dose. Every cow that gave a reaction and was killed was shown to have tuberculosis."

Dr. Irving A. Watson, above referred to, says further: "The great value of tuberculin as a means of determining the existence of tuberculosis in a herd of animals is far beyond that of any other means or methods known. In fact, it comes so near being an infallible test that the errors of diagnosis based upon its use are practically *nil.* By this means the disease can be detected when in its incipient stages, long before it would be possible for the most skilled veterinary surgeons to discover it by the ordinary physical examination."

Dr. James B. Paige, V.S., in charge of the herd at the Hatch Experiment Station of the Massachusetts Agricultural College since 1890, stated, after two years' experience with tuberculin (1892–94), that this agent "indicates the existence of tuberculosis in the lungs and other parts of the body when objective symptoms are absent, and when no germs can be discovered by microscopical examination of mucus from the nostrils."

Not long ago the French Minister of Agriculture appointed a commission composed of eminent scientists to make a thorough investigation of the objections that had been made against tuberculin on the grounds that healthy animals were liable to be infected by it, and that its reactions were unreliable in respect to both healthy and diseased animals. The commission concluded that the objections were either altogether erroneous or very superficial; and in most emphatic language the utility of tuberculin as a means of diagnosing tuberculosis in its first stages is recognized by this official body of scientific men.

The growing recognition of the immense service which tuberculin may thus be made to yield in lessening the ravages of human consumption by detecting the disease in its incipient stage in the animal is gratifying, and the subject is not one to be treated lightly. As has

been well said, it may be that we are yet remote from that remedy which has been the subject of such eager longing, that disappointment will be the lot of investigators over and over again, that the heart of humanity must continue to sicken from hope deferred, and that consumption with the hideous miseries that follow in its train will long continue to ravage the nation. But is it not a noble achievement to furnish an agent which cunningly and unfailingly seeks out the sources of hidden danger, which prevents the evil that it cannot mitigate, which cries aloud in warning ere it is too late to save? Is there not a supreme merit and lofty inspiration in such a performance? Aye, truly; it is a man's success which constitutes his right to honest fame, and that claim in the case of Robert Koch is not to be abated one iota, simply because much has been left undone, or because the success was less far-reaching than a sanguine world permitted itself to hope!

TRANSMISSION OF TUBERCULOSIS FROM COW'S MILK.

BY W. T. PARKER, M.D., WESTBORO, MASS.

Dr. Roberts contributes to the *Journal of the American Medical Association* a very interesting article in which he appears to throw some doubt upon the generally accepted theory that tuberculous cows can through the medium of their milk convey tuberculosis to man. This paper is reviewed in an editorial in the same number. Considering the fact that the International Congress for the Study of Tuberculosis met in Berlin as recently as last May (24th to 27th), this is especially important as being entirely opposed to the views so openly promulgated there. The Germans have given most careful attention to the subject, and from Koch down a large number of scientists have made very careful investigations. This congress was held under the patronage of the Emperor, and its membership contained some of the greatest physicians the world can produce. The congress decided, if we are rightly informed, that tuberculosis *is* easily conveyed from man to animals, and *vice versa*. Tuberculosis has been found in swine feeding upon diseased cow's milk.

Every possible precaution was considered against the spread of this disease—except that goat's milk for children and invalids was not referred to at all. Yet in many countries in Europe, notably in Switzerland, and in Asia and Africa, goat's milk is largely used. Boys take small herds through the streets and milk them in the presence of the purchaser. Honey is also prescribed to be eaten upon bread, in connection with drinking the milk of goats. These animals are immune to the poison of tuberculosis

The congress, among many other valuable suggestions for the prevention and cure of consumption, declared that "milk should be used only after the animals (cows) furnishing the milk supply have been submitted to the tuberculin test and have been proved to be free from the disease. The sale of milk from such animals as have *not* been submitted to the tuberculin test should either be forbidden by law or it should be sold only after *thorough* sterilization. It is well known that milk, not only from cows that have generalized and udder tuberculosis, but also very often from cows which have only local tuberculosis, may be dangerously infected, and the continued use of uncooked milk from such animals is especially dangerous for children and young people. The fact that tuberculosis is found often in swine, as well as in mankind, that have been fed upon the milk of tuberculous cattle is good enough evidence for most physicians that the disease may be contracted by milk drinking. More than one such case has come under my own notice of deaths of infants and young children from the milk of diseased Jersey cows. In each case the cows were owned by the family of the infected children.

"The wide distribution of tuberculosis amongst children and the localization of the disease in many cases are indications of infection by the use of milk."

Referring to the various methods of cure: "*Scientific experiments in the line of serum therapeutics promise better results than any other, and thus may eventually lead to some thoroughly satisfactory method.*"

This is most excellent encouragement for those who are interested in the use of normal goat's blood serum in the treatment of tuberculosis. The use of goat's milk and goat's serum in the treatment of all forms of tuberculosis is I believe the best method of cure available to-day, so far as serum treatment is concerned. Of course, nothing can equal the climate cure of New Mexico and eastern Arizona. The combination is the ideal. Long ago drugs have been entirely abandoned by some excellent physicians. Where do we find iodide and bromide of potassium, morphine, and nauseating cough mixtures, cod-liver oil, petroleum, creosote, and such remedies prescribed for consumption? Out-of-door life in the climate of Switzerland, Ventnor, Isle of Wight, the Adirondacks, the seashore, North Carolina, northwestern Texas, the Panhandle, Indian Territory in some places, New Mexico, Arizona, Montana, and Colorado, nourishment, and occasionally a carefully selected iron tonic, are the remedies generally prescribed. The use of the cow's milk after tuberculin tests have been made I never could consent to.

The Germans have taken the lead in the establishment of sanitariums for consumptives, more or less after the plan of the famous

hospital near Ventnor, on the Isle of Wight. Good results from well managed sanitariums even in the climate of Massachusetts have been observed; and what was rare twenty years ago in the rational treatment of consumption in sanitariums is now quite common from the Atlantic to the Pacific.

The importance of faithful investigation of tuberculosis cannot be gainsaid, but when the rumor is set afloat that tuberculosis in cattle and pigs is not identical with tuberculosis in man, a great harm is likely to be done the cause of sanitary reform.

A difficult work it is to control the milkmen and force them to give up the sale of adulterated and unwholesome milk, much of which is unfit to give to swine.

When we go about on our sick calls and see children and adults dying for want of nourishment and examine the milk purchased for their food, we are forced to believe that sanitary laws preventing the sale of unfit milk are most urgently needed.

The milk dealers as a class are indifferent as to the quality of the milk supplied, and that which is fit to prescribe for our patients is of very small amount. The farmhouses, the barns, the wells, cisterns, and the food for the cattle and the care bestowed upon them by their economical owners, are a strong incentive for us to inquire whether we cannot do better by those entrusted to our care by making use of goat's milk, which we know *can* be obtained pure and wholesome.

Dr. Carlos, of Bordeaux, has called attention to the inferior and dangerous products commonly sold under the name of "seltzer water" in France. It appears that the so-called seltzer water can now be produced at so cheap a rate that in many cafés and other refreshment establishments it is provided to customers *gratis*. In consequence of the low price at which apparatus for charging water with gas can now be obtained, all sorts of persons constitute themselves manufacturers of seltzer water. Water of any sort is employed for the purpose. It is saturated with carbonic acid gas, so produced as to be very impure, and is delivered in siphons of inferior quality, the fittings of which are made of a metal rich in lead, of which notable quantities enter into solution. These strictures apply with equal truth to many of the aerated drinks supplied in the United States, which are the products of unscrupulous manufacturers, and the use of which is dangerous to health. A guarantee as to quality is especially necessary in regard to such preparations.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE USE OF ALCOHOL.

Were it not that the facts of every-day life are those which constantly evade solution by human experience, it would be strange that there is still so much ambiguity about the actual status of alcohol as an article of human consumption.

A recent discussion before the New York Medico-Surgical Society affirmed that a unanimity of scientific opinion had been approximately attained regarding the true value of alcohol as a therapeutic agent. The position of nearly every speaker was to regard it as a remedy in no general sense to be relied on, but one which had definite and distinct uses in certain conditions of the organism.

The recent investigations of Professor Atwater have added materially to our knowledge regarding the food value of alcohol. The modern conception of alcohol practically assigns it to the class of foodstuffs known as carbohydrates, and it may be wisely considered analogous in its effects with sugars, starches, and fats, substances designed to generate body heat. It is assumed that the natural intake of oxygen by the lungs is 750 grammes a day. It is calculated that the oxidation processes necessary for evolving the heat and energy essential for keeping up the constructive activity of the body call for an expenditure of 600 grammes. This would leave an oxygen reserve of 150 grammes, and this, it is stated, without overtaxing the oxygenating capacity of the system, might be used in taking care of two ounces of pure alcohol daily. The ingestion of this two ounces of alcohol, the equivalent of four ounces of ordinary whiskey, would, of course, have to be equally distributed over twenty-four hours to allow its oxidation to be accomplished without upsetting the balance of the oxygen reserve. This, perhaps, is the extreme limit of scientific sanction the consumers of alcohol can obtain for the justification of their habits.

That the human economy is able to take care of this highly concentrated food in moderate quantity is, however, no argument that it should be called upon to do so. Even in disease the administration of a small amount of alcohol will rapidly equal the compensatory oxidation factors. If a typhoid fever patient took half the amount of food ordinarily taken, three ounces of alcohol in twenty-four hours would generate the full heat deficiency the diminished food intake would cause. Alcohol is indeed a food, but not a good food. It is a food the digestion of which entails much nervous strain. Ainstie has demonstrated that alcohol does not enter the blood to any extent in the free state. It is probably transformed by the epithelia of the alimentary canal very rapidly with the production of heat into carbon dioxide and water. This must entail strain on the nervous mechanism, and overstimulation must inevitably result in contraction of the blood-vessels and so interfere with the nutrition of the body.

The view has recently been advanced by certain writers having a sociological trend that the deeply rooted craving for stimulants is naturally innate and can only be overcome by the acquisition of an alcoholic immunity. The effect of alcohol among aboriginal races is similar to that produced among those habituated to its use whose unstable nervous balance renders them intolerant of its effects. In both it causes loss of self-control. Sooner or later, it is contended, the natives who cannot deal with alcohol as masters are bound to go by the board, both those who have acquired and lost the mastery of it and those who by their insulation have hitherto been protected from the advent of the demon they have yet to chain.

Nothing can be more deplorable than the unfair and biased instruction regarding the nature of alcohol usually imparted in school manuals. The more closely absolute truth is taught the better. The falsifying of facts even with moral intent can only be attended with disaster when the inevitable awakening occurs.

EDITORIAL NOTES.

Physiognomy and Character.

That there is a strong relationship between the qualities of the mind and the features of the face cannot be doubted. Every long-sustained passion of the inner life may be so strongly depicted upon the countenance as not to be easily mistaken by the discerning, and the judgments which we form at the first view of this great intellectual and spiritual mirror are very frequently confirmed by further acquaintance. But it is almost amusing to find self-styled students of charac-

ter peremptorily deciding upon the mental and moral make-up of men and women by analysis of the turn of the lip, the arching of the eyebrows, or the size and form of the ear. This last has, perhaps more than any other, been considered an unfailing index, insomuch that it has been claimed by the adept that they can determine whether a man be of one type or another simply by applying measurements to his ear. The curious medley of acute observation and wild conjecture which Lavater published in the closing years of the last century was eagerly received and for some time gained implicit confidence. A servant could scarcely be hired, it was said, until the descriptions and engravings of Lavater had been consulted in careful comparison with the candidate's features. There was no longer any need for the difficult and complicated study of human nature, for if a man had only Lavater's rules he could immediately decide whether the stranger he might meet was an honest man or a rogue, whether he was a miser or a prodigal, and what manner of man he had been from the day of his birth!

A Decision on Osteopathy.

The State of Missouri has made a decision in regard to the practice of osteopathy in that State which does its judiciary much honor. As the decision is an important one, we here quote it in full:

From the testimony in the case, which I have gone over accurately, it is my opinion that as a matter of fact the American School of Osteopathy at Kirksville, Mo., is not a reputable medical college; and that the defendant in this action, the State Board of Health, has simply performed its duty in refusing to recognize the said school or its diplomas, and to license its disciples or graduates to practice their art in this State.

Out of forty-four States in the Union, it appears in evidence that only four or five States have authorized or allowed the disciples of osteopathy to practice their calling within their borders. In every State the right of an osteopath to practice his calling must depend on the statute of the particular State. In Missouri, where the American School of Osteopathy is chartered, it is enacted by statute that the laws applicable to medicine and surgery do not apply to them; and the testimony of the plaintiff's witnesses in this case shows that they do not teach nor profess to teach medicine and surgery in the American School of Osteopathy. How can it be called a reputable medical college, when its own professors repudiate and refuse to teach materia medica and therapeutics and chemistry and anatomy and physiology, and confine themselves alone to manipulation? Like the Rosicrucians of the seventeenth century, osteopathy claims to possess a secret gift or method of manipulation which their witnesses testify cannot be learned from books, by which, however, they claim they can heal the sick. Their professors on the stand refuse to divulge what their methods or modes of manipulatory treatment are. Sorcerers and witches used love philters, incantations, and magic talismans for healing the sick, but refused to divulge what the ingredients were, or how the talisman acted.

It is singular, indeed, that in an enlightened age like this such humbug schools and ignorant pretenders could find recognition by the laws of any State.

Let the injunction be dissolved and the petition dismissed.

ITEMS AND NOTES.

SMALLPOX is prevalent in many places in North Carolina.

THE Boston Medical Library Association is to have a new building costing $100,000.

ON January 20 the County Hospital at Colorado Springs, Colorado, was destroyed by fire.

A HAVANA newspaper states that there are already too many doctors and lawyers on that island.

THE plague is reported to have made its appearance at Noumea, capital of the French Penal Colony at New Caledonia.

DR. O. T. OSBURN, of the medical faculty at Yale, has been acquitted of the charge of performing an autopsy illegally.

THE mayor of Pine Bluff, Arkansas, has been requested by the local Board of Health to issue a proclamation making vaccination compulsory.

THE sum of $80,000 has been anonymously donated to Cornell University for the purpose of erecting a building for the study of anatomy and physiology.

OWING to the impossibility of importing carbolic acid from England, the price has risen quite rapidly of late. Carbolic acid is used in the manufacture of lyddite.

PRESIDENT MCKINLEY, at the request of the Surgeon-General of the Marine Hospital Service, has detailed medical officers to be attached to every consulate in the East.

THE faculty of physicians and surgeons of Glasgow was founded in November, 1559, the charter being granted by James VI., and its tercentenary was celebrated by a dinner on November 29, 1899.

ON Wednesday, January 3, 1900, the regular meeting night of the Société de Chirurgie de Paris, the society did not meet, the second time in over fifty years that the surgeons have missed a meeting.

ADJUTANT-GENERAL CORBIN and Surgeon-General Sternberg are opposed to the bill which was recently introduced into Congress authorizing the appointment of dental surgeons with the rank of major.

On January 18 last Prof. William Osler, of the Johns Hopkins University, addressed the students of the medical department of the University of Pennsylvania on "John Lock as a Physician and Philosopher."

The health authorities of Illinois fear a general spread of smallpox throughout the State owing to the fact that the disease was prevalent for a long time without proper measures being taken to stop its progress.

There recently occurred at Rio Janeiro, Brazil, the death of Dr. Domingo Friere. He held the chair of chemistry in the Government University, and earned a great reputation for his yellow fever researches.

The well known actor, Mr. Felix Morris, who died recently in New York City from pneumonia, was educated as a physician at Guy's Hospital, but after obtaining his qualifications abandoned medicine for the stage.

Governor Roosevelt has recently had his attention called to the filthy and generally unsanitary state of the prisons at Sing Sing, Auburn, and Dannemora, and the need for better discipline and classification of the convicts.

The silver jubilee number of the *Deutsche Medicinische Wochenschrift* contains reviews of the last quarter century in surgery, hygiene, etc., each written by a leading specialist, eight in all — Czerny, Fluego, Von Leyden, etc.

There has been recently introduced in the New York legislature a bill to regulate the sale of cigarettes. Dealers must obtain a tax certificate and make oath that the cigarettes to be sold contain no injurious drugs or narcotics.

Up to the present time no deaths have occurred as a result of the smallpox epidemic in Quebec, which started over a month ago; 350 persons have recovered from the disease, fifteen are still sick, and about ten houses are now infected.

A short time ago a woman in New York City was engaged in spraying the throat of her child suffering from diphtheria. The nozzle of the spray apparatus became loosened and lodged in the child's throat, and he was choked to death.

The medical service at the Paris Exposition has been organized by Dr. Gilles de la Tourette, formerly chief of clinic at the Salpêtrière

under Charcot. He has ten assistants — Drs. Donbre, Reymond, Critzmann, Bourges, Emory, Goubert, Laborde, Dandieu, Deschamps, and Gaillard.

THE report of the consulate at Cairo shows that hashish is excessively used among the native population. Forty-one per cent of all admissions to the city hospital among the male patients are attributed to this drug or to its combination of alcohol.

COMMISSIONER OF CHARITIES KELLAR, of New York City, has dismissed twelve physicians of the Metropolitan Hospital staff because of differences with the superintendent. They are said to have hanged him in effigy, using a cadaver for the purpose.

THE Board of Education of Oakland, California, has been advised by the Board of Health to dismiss from the public schools any teacher or pupil suffering from pulmonary tuberculosis, and to prevent the admission of any such sufferer in the future.

A SHORT time ago, while lecturing before the students of the Johns Hopkins University, Dr. Howard Kelly, of Baltimore, was bitten on the finger by a rattlesnake. He sucked the wound for a minute, and then continued his lecture none the worse for his accident.

ACCORDING to the *Medical Record*, the case of a man at Brunswick, Md., is reported in which life persisted for sixty hours after the reception of several gunshot wounds, one of which, it was found on post-mortem examination, had perforated the heart and another the intestines.

THE elopement, some time ago, of the Princess Chimay with the gypsy who bore the name of Janos is now followed by the announcement of the forthcoming wedding of the Princess Janos to Count Hunyadi. This conjunction of names is a loose enough combination to move the bowels of compassion.

AT a recent sitting the French Chamber of Deputies, on the proposal of Dr. S. Dubois, one of the members for Paris, voted in favor of the early constitution of a great commission of hygiene, analogous to those of assurance and social providence which have been so actively at work during the last two or three years.

A SHORT time ago a woman aged forty-eight died at St. Peter's Hospital, Brooklyn, where she had been under treatment for some time. An autopsy revealed the fact that death was due to a puncture of the lungs by a short piece of fine wire. The wire appears to have been embedded in a large piece of bread which she accidentally swallowed.

A PRIVATE letter from Sir Wm. MacCormac, president of the Royal College of Surgeons, states that there is excessive ill-feeling between the army medical officers in South Africa and the female nurses at the base hospitals, some of the former urging the sole employment of male orderlies. On the whole, however, especially at the front, the medical arrangements seem to be giving the greatest satisfaction.

ACCORDING to the *Journal of the American Medical Association*, when the Dreyfus case was in progress one of the smaller Paris dailies insinuated that Labori had not been shot at all, and that the whole story of the shooting and the bullet was fabricated to arouse sympathy for the Dreyfus side. Labori sued the paper for damages, and nearly a dozen physicians testified in regard to the actual accident. Even a radiograph of the bullet was produced. It is unnecessary to add that Labori won his case.

THE *Journal of the American Medical Association* is authority for the statement that a board of medical officers to consist of Assistant Surgeons William J. Calvert and P. P. Strong, U. S. A., and Acting Assistant Surgeon Joseph J. Curry, has been appointed to meet at one of the general hospitals in or near Manila, P. I., for the purpose of studying tropical diseases as they occur in the Philippine Islands. The board will receive its instructions from the surgeon-general of the U. S. Army, and will be under the direction of the chief surgeon, Department of the Pacific.

THE French Under-Secretary of State, who is responsible for the posts and telegraphs, has, with a view to avoid transmission of infectious diseases, just made an order that the receivers and transmitters of all public telephones shall be disinfected daily by being washed with a strong solution of carbolic acid. This concession to the principles of hygiene will be received with a certain amount of skepticism by medical men. The idea they say is excellent, but they take exception to the choice of an antiseptic, for carbolic acid has an abominable smell and has a very feeble microbicidal power.

THE practice of medicine in Calabria, Italy, has its drawbacks. In November, 1899, in the commune of Cataugaro, a highly respected physician, Dr. Giorgio Vaccaro, was assassinated, and his brother, coming to his relief, was also shot. At Borgia, in the same region, and about the same time, Dr. Pietro Chiriac was stabbed by a patient he was attending. The Rome correspondent of *The Lancet*, who gives these facts, remarks that Calabria shows that in the case of a professor, considered all the world over as a "sacro-Sanct" against bodily aggression, she can "go one better" than the worst of the semicivilized or wholly savage of her sister communities.

ACCORDING to *The Lancet*, not long ago a qualified Berlin midwife was prosecuted and fined because she had contradicted a medical man in the presence of a parturient woman, this being regarded as a misdemeanor, because the patient was thereby induced to believe that the medical man in charge was incompetent. The medical department of the Berlin police has also issued an order to the qualified midwives informing them that it is illegal to recommend individual medical practitioners to women in their confinements, because a law passed in 1725 provides that the patient must be at full liberty to consult any medical man she desires. It is especially against the law for midwives to have an agreement with a medical man and to be paid by him for recommendations to patients.

THE *Journal of the American Medical Association*, quoting *Progrès Médical*, says that Broca, Sapelier, and Thibaut announced at the meeting of the Paris Académie de Médecine, December 27, 1899, that they had succeeded in obtaining a serum from a horse habituated to the use of alcohol that, injected into animals with a cultivated appetite for alcohol, produced such a disgust for it that they would neither eat nor drink if it were offered to them. Clinical tests confirm this experience. The action of the serum seems restricted to the latent period of chronic alcohol intoxication. The subject loses his appetite for alcohol or any beverage containing it, and may even acquire a disgust for it and renewed susceptibility to its effects. He retains his taste for wine, the Frenchmen are careful to add, and retains strength and appetite, but the serum is unable to repair the organic damages already inflicted. All of which must be accepted with some amount of skepticism.

THE origin of plague at Santos, according to the *Journal of the American Medical Association*, was caused by the delay of the Portuguese authorities in announcing the presence of the plague at Oporto, and is responsible beyond question for the outbreak of the plague at Santos in Brazil. A number of mild cases of a suspicious disease were reported to the authorities at Santos by physicians, August 18, 1899, but as bacteriologic tests were negative, and as no source of contagion was evident, the cases were diagnosed as yellow fever, pernicious attacks with ganglionary infarcts, or mere adenitis. Then came the announcement that there had been plague at Oporto since July, and it was recalled that sixteen vessels had arrived at Santos from Leixoes, a port within six kilometers of Oporto and closely connected by railway, between July 4 and August 14, and that there had been great mortality among the rats during the latter part of July. The bacteriologic tests of suspicious cases at Santos revealed the plague October 18, when it was at once officially announced.

In his annual report Secretary of War Root says: "The health of the army from the beginning of the Spanish war has been remarkably good. The deaths from all causes (including casualties in action) in the whole army, regulars and volunteers, for the fourteen months from May, 1898, to June, 1899, inclusive, were 6619. This is equivalent to an annual rate of 33.03 per 1000 of strength. The deaths from disease during the whole period were at an annual rate of but 25.68 per 1000. For an army largely drawn from a cold climate and transported suddenly to the tropics, mainly composed of new recruits not trained to care for themselves in camp or on the march, and a great part of which was stationed in a malarial country or quartered in and about cities infected with yellow fever, and especially adapted to the production of typhoid, this is an extraordinary result and reflects credit upon all the branches of the service engaged in clothing, feeding, and caring for the men. The significance of the annual rate of death from disease in the Philippines (17.20 per 1000) may be better appreciated by comparison with the rates in some of our well known American cities. The annual death-rate per 1000 is in Washington 20.74, in Boston 20.09, in San Francisco 19.41, in New York 19.28, and in Baltimore 19.10."

The *Philadelphia Medical Journal*, quoting an English exchange, says that Milton was induced by a friend to write out in full the details of his case, in order that the notes might be sent to a Parisian oculist, named Thevenot, for his judgment and advice, and the following is an abridged account of Milton's communication: "It is now, I think, about ten years since I first perceived my sight to grow weak and dim. When I used to sit down to read as usual in the mornings, my eyes gave me considerable pain. If I looked at a candle it appeared surrounded by an iris. In a little time a darkness, covering the left side of the left eye (which was partially clouded some years before the other), intercepted the view of all things in that direction. Objects, also, in front seemed to dwindle in size whenever I closed my right eye. Before I wholly lost my sight, as soon as I lay down in bed and turned on either side, brilliant flashes of light used to issue from my closed eyes; and afterwards, on the gradual failure of my powers of vision, colors, proportionately dim and faint, seemed to rush out with a degree of vehemence and a kind of noise. These things have now faded into uniform blackness, such as ensues on the extinction of a candle. The constant darkness, however, in which I live day and night, inclines more to a whitish than a blackish tinge, and the eyes turning round admit, as through a narrow chink, a very small portion of light."

NEW PUBLICATIONS.

RECOLLECTIONS OF A REBEL SURGEON.

The *Texas Medical Journal* has long had connected with it a contributor who has been variously known as "The Fat Philosopher," "Our Genial Friend," "The Jolly Old Doctor," etc. This individual now provides us with a volume of his reminiscences. The stories are all interesting; some are humorous, some sad, some pathetic, and all it is said are actual occurrences—no fiction, but all fact. They are recollections of fun, frolic, fishing, or flirting, as the case may be. The book is illustrated with a number of suitable engravings and forms a collection of stories with which the busy practitioner may while away an hour to advantage.

Recollections of a Rebel Surgeon (and Other Sketches); or in the Doctor's Sappy Days. By F. E. Daniel, M.D. Illustrated. Price, $1.10. Austin, Texas: Von Boeckmann, Schutze & Co., 1899.

CHRISTIAN SCIENCE.

The author of this little book makes a powerful plea for children, that they may be saved from the mental vagaries of their guardians. That which is the active principle in so-called Christian science, be it suggestion, expectant attention, or other mental stimuli, cannot be operative in babies as it may be in adults; hence cruel suffering follows to these children, who die from diphtheria and other diseases from which they ought to be saved.

The legal aspects of Christian science are admirably commented upon, and the reader of this little book will find much therein to fortify himself in the refutation of the ignorant and unintelligent doctrines of Eddyism.

Christian Science. An Exposition of Mrs. Eddy's Wonderful Discovery, Including its Legal Aspect. A Plea for Children and Other Helpless Sick. By William A. Purrington, Lecturer upon Medical Jurisprudence, Bellevue Hospital Medical College. Price, $1.00. New York: E. B. Treat & Company, 1900.

PROGRESSIVE MEDICINE.

The fourth volume of this excellent digest of the medical sciences more than maintains the reputation attained by its predecessors. The present volume contains a *resume* of the progress of medicine in nearly all its departments. A practical therapeutic referendum occurs as a novelty in this number. The editors and publishers of Progressive Medicine have undoubtedly provided the profession with an admirable method of keeping in contact with medical progress in its varying changes.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Volume IV, December, 1899. Philadelphia and New York: Lea Brothers & Co., 1899.

ORTHOPEDIC SURGERY.

The second edition of this excellent work is well fitted to inform the reader regarding the most modern methods of treating deformities by appropriate apparatus and by surgical interference. The work will be found exceptionally useful to the student and practitioner from the clearness of the text and the numerous illustrations, amounting in all to 621. The work is certainly one which surgeons cannot afford to be without.

Treatise on Orthopedic Surgery. By Edward H. Bradford, M.D., etc., and Robert W. Lovett, M.D., etc. Illustrated with 621 Engravings. Second Revised Edition. New York: William Wood & Company, 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Treatment of Lupus by X-Rays.

P. M. Jones (*Philadelphia Medical Journal*, Jan. 6, 1900) reports two cases of lupus which he treated by exposure to the *x*-rays. In one he was successful, in that the lesion has remained healed for nearly a year, and the other is still under treatment and making favorable progress.

The treatment of lupus by exposure to *x*-rays, says the writer, is akin to the treatment by exposure to ultraviolet light (Finsen), and to the treatment by exposure to concentrated light (Abrams). In each case the action seems to be a simple one, and the explanation not far to seek. The pathologic tissue is largely composed of very complex and unstable molecules, which collectively make up the cell structure of the lesion. As we know, comparatively little energy is required to upset these complex molecules and cause a rearrangement of their atoms, thus producing a very different cell, with a consequent modification of the cell, if not its actual death. In the action of sunlight upon the skin (burn, tan, freckles, etc.), we have excellent illustrations of the capability of radiant energy to produce these chemic rearrangements. As the rays from a soft tube, which are more easily absorbed by the skin, or any body first encountered, than are those from a "hard" tube, are found to produce the so called dermatitis Roentgenii more readily than the rays from a hard tube, so they are more efficacious in the treatment of lupus. It is simply that such rays, of comparatively long wave lengths, are absorbed and part with their radiant energy, while rays of shorter wave lengths, less readily absorbed, do not to any great extent affect the chemical arrangement of the cells in the superficial tissues. The writer believes, for the reasons just given, that the method of treatment by ultraviolet light (Finsen) will be found to be quicker and better than the treatment by *x*-rays.

Congenital Lateral Curvature of the Spine.

H. L. Taylor (*Pediatrics*, Jan. 15, 1900) says most authorities state that lateral curvature usually develops between the tenth and fourteenth years. Dr. Samuel Ketch, however, from a study of 229 cases, says that over one-half occurred before the age of twelve, and forty-two in the first seven years. Eulenberg found five cases out of 1000 under one year of age.

Within a short time the author has observed two cases of lateral curvature in infants under one year at the Hospital for the Ruptured and Crippled. The first was a rachitic girl of nine months; the convexity of the curve was to the left in the dorsal region, and the mother stated that the deformity was first noticed at three months. The second case was a girl of three months, and the curvature had been noticed only two weeks. In this baby also the curvature was to the left, but somewhat lower. No evidence of rickets was discovered in this child; the deformity was probably congenital, and due to some malposition *in utero*. The mother stated that the vertex presented, and that the labor was easy.

The prognosis in the congenital and early rachitic cases is serious; if untreated, the deformity usually increases, and may become very severe.

Manual correction should be employed several times daily, and the child carried on the arm of the side toward which the spine bends. If the baby's spine curves to the left, it should be carried on the mother's left arm, and *vice versa*. A small, firm hair cushion should be placed under the baby's arm on the convex side. If necessary, the child may be strapped to a frame with correcting pads for a time, and given daily massage. The most active treatment should be instituted while the child is small, as it will then be most effective.

Excision of the Vesiculæ Seminales for Tuberculous Disease.

Mr. Mansell Moullin (*British Medical Journal*, Jan. 13, 1900) reports two cases in which he has removed one of the vesiculæ seminales for tuberculous disease extending upward from the epididymis. The patients were young adults. The testis, which in each case had been involved for some time, was removed through an inguinal or an inguino-scrotal incision, and the cord divided as high up as possible. The patient was then placed in the lithotomy position, and the under surface of the prostate and base of the bladder exposed through a modification of Zuckerkandl's incision. The vesiculæ seminales and the termination of the ejaculatory duct were then dissected out. In one case a small intervening portion of the vas deferens was left behind. In the other two ligatures were placed upon the cord in the groin, one upon the vas deferens by itself and the other upon all the other structures, and the whole of the remaining portion of the vas was extracted through the perineal opening. There was very little bleeding in either case. The wounds were packed with iodoform gauze, and the external sphincter sutured to the centrum tendinosum. One healed up without any inconvenience.

In the other, in which the ejaculatory duct had been torn out from the urethra, a small urinary fistula persisted for some months, a few drops coming through on micturition. There was no fever in either, and the action of the external sphincter was not impaired in any way.

Mr. Mansell Moullin strongly advocates complete removal of the vesicula seminalis and vas deferens in every case of tuberculous disease of the epididymis in which the vesicula can be felt distinctly through the rectum, with the view of clearing out the whole disease, and of giving the patient one more chance of recovery before the bladder became hopelessly involved.

Danger-signals in Chloroform Anesthesia.

Koblanck, of Berlin (*Centralblatt f. Gynäkologie*, 1900, No. 17), calls attention to athetosic movements of the fingers occurring in cases of threatened chloroform asphyxiation—a danger-signal which has either been totally overlooked or barely mentioned up to the present date. These peculiar contractions of the fingers and wrists, often accompanied by irregular movements of the eyes, have nothing in common with the voluntary defensive movements of incomplete narcosis, as they occur only after total suppression of reflex contractility. They are in the nature of premonitory symptoms, and obtain while pulse and respiration are still normal and the pupils in a contracted or natural state, but irresponsive to light. If now the chloroform be pushed, we may look for the usual symptoms of asphyxiation. Prompt removal of the mask, however, is followed by subsidence of the contraction, while the anesthetic state continues as before, and respiratory or circulatory disturbances rarely set in at this juncture.

Koblanck ascribes these contractions to saturation of the system with the anesthetic. In case of established asphyxiation he relies upon immediate hooking of the epiglottis with the finger, followed by artificial respiration (preferably after the Maas-König method), and has very little confidence in the usual plan of lifting the lower jaw and pulling the tongue forward with forceps.

Wounds of the Heart and Pericardium.

From his studies on wounds of the heart and pericardium Loison (*Rev. de Chir.*, Nos. 1 to 7, 1899) reaches the following conclusions:

1. The symptom-complex of wounds of the heart and pericardium is no less certain than that of the peritoneum or of certain abdominal viscera.

2. The diagnosis is as difficult and as delicate in the one case as in the other, and requires all the surgeon's vigilance.

3. The prognosis is not always grave, as the statistics which the author has collected, and Fischer's, show.

4. Therapeutics is not unavailing, as has been proved by numerous successful interventions which have lately been carried through by various surgeons.

Ovarian Transplantation.

At a recent meeting of the Vienna Gesellschaft, Knauer (*Medical Press*, Jan. 3, 1900) reports the results of his experiments on guinea-pigs in which he had transplanted thirteen ovaries. (*a*) He found that when the ovary was extirpated and placed in a fold of the mesometrium or between muscle and fascia, the animals made excellent recoveries; (*b*) that the transplanted ovaries three years later were healthy and active functionally, and several of the cases when impregnated at that late period produced three normal young animals, and no alteration could be observed by the operation. In eleven of the cases, however, the ovaries healed up perfectly, but were somewhat badly nourished, while the uterus and mammæ became atrophied.

MEDICINE.

Vaccination.

A most amusing absurdity, says the *Cleveland Journal of Medicine* for December, 1899, threatens to occur in a town *not far* from Cleveland. The health officer of the town has been so unfortunate as to experience a large proportion of unsuccessful vaccinations. He attributes this to the poor quality of the virus that he has employed, although other physicians in the same town, using the same make of virus bought from the same drug stores, have experienced successful results. In order to show his authority, his contempt for the opinion of his professional brothers, and his detestation of the fraud that he alleges has been practiced upon him, he now asserts that he will sue for damages the druggists who sold the virus, and that he will compute damages at the rate of 75 cents for every unsuccessful vaccination. Beyond making himself additionally ridiculous, it is difficult to see any result that he may achieve from this procedure.

Vaccine is a perishable commodity, and care in its employment is imperatively demanded if successful results are usually to be attained. Experience suggests that probably a vaccination may fail in a susceptible subject, if the area of operation is cleaned with a strong antiseptic, for the virus will not stand contact with an antiseptic. Many

failures are also due to lack of care in storing the vaccine in the drug store. The glycerinated virus, which is undoubtedly the best, should always be stored in a cool place, for even at so moderate a temperature as 70° F. it may become spoiled. Then of course the virus must be fresh, as it deteriorates with time. Another possible source of failure to secure a positive result from vaccination lies in the method of dressing the wound immediately after the operation. Undoubtedly an antiseptic dressing applied too soon may destroy the activity of the virus. Yet the glycerin is so slow in drying that the operation would be made too tedious by waiting until the virus had dried in sufficiently to warrant the application of a protective dressing.

The safest technique for vaccination seems to be about as follows: Scrub the arm thoroughly with soap, brush, and hot water; dry it with a clean towel; then wash the skin with alcohol or ether. After applying the virus to the wound, place around it a perforated piece of one-quarter inch gummed felting that will keep from contact with the wound the overlying surgical dressing. As this ring is not usually very comfortable, it may be removed in a few hours, and the vaccination wound simply covered with a clean protective dressing. With this technique and with vaccine from a reliable laboratory, not many failures will occur among susceptible cases.

As a general rule the results from glycerinated vaccine are not manifested as promptly as after the use of the point: the typical vesicle may not appear for ten or twelve days after vaccination, in a large number of cases.

The Existence of Arsenic in the Normal Organism.

At a recent meeting of the Paris Academy of Medicine M. Gautier (*Lancet*, Dec. 23, 1899) communicated a paper upon the "Existence of Arsenic in the Normal Organism." He showed that arsenic was met with in the normal body. In the thyroid gland it was found in very small quantities, it was true, but still capable of being weighed, and it also existed in still smaller quantities in the brain and in the thymus, but no trace could be found in any other viscus. It existed as an arseno-nuclein—*i.e.*, a combination of arsenic and nuclein—which, together with the common phosphorized nucleins, plays an important and even necessary part in the economy of the cell-nucleus (noyau). Therefore in various maladies of the viscera where arsenic existed normally and disappeared pathologically, the medicinal administration of arsenic was indicated and gave good results. The various organs would seem to possess certain latent specific functions, with which were bound up certain chemical characteristics marked by the

presence of certain chemical bodies and particular kind of cells. For example, manganese was found in connection with certain oxidizing ferments, iodine in the thyroid body, fluorine in the bones, and arsenic in the brain, the skin, and the thyroid. This theory, which was founded upon accurate chemical analysis, allowed the physician to formulate definite lines of medical treatment with a view to supplying to the various organs the indispensable chemical substance which might be lacking in any particular case. Finally, the idea was of great importance from a medicolegal point of view. For instance, in estimating the amount of arsenic to be found in the body the various organs should be taken one by one, for arsenic existed normally in the brain, the skin, and the thyroid body.

This last remark of M. Gautier brought up M. Brouardel, who remarked that he had always insisted upon the necessity for keeping the organs separate at a post-mortem examination. While he gave every credit to the important work of M. Gautier, yet he must say that the previous results obtained by medicolegal experts were not weakened, for in their case arsenic had been detected in marked quantities in the stomach and especially in the liver.

The Result of the Labors of the German Plague Commission to Bombay—Remarkable Researches on Leprosy.

Under the distinguished names of Gaffky, Pfeiffer, Sticker, and Dieudonne there has just been published in Berlin (*Indian Medical Record*, Dec. 13, 1899) a most interesting volume containing the results of the labors of the German commission which was sent to Bombay to investigate plague in connection with the plague epidemic of 1896–97.

Sticker combines the important results of his researches and observations in the following propositions:

1. The examination of an individual suspected of leprosy, of his family and of his human surroundings, must be limited to a search for the hitherto known external marks of leprosy in the skin and nervous system. It must, above all, investigate the new proof of the nasal mucous membrane and its secretion in the apparently healthy children of leprous parents.

2. Obstinate nasal catarrh, beginning ozena, and, above all, frequent unusual hemoptysis in men who have lived for years in the company of lepers, are extremely suspicious as initial symptoms of leprosy before there is any external manifestation of the disease; they call for bacteriological investigation and immediate local treatment.

3. Other diseases whose etiology is doubtful (of the Morve type, etc.) may be distinguished from leprosy by the leprous ulcer in the

nose, by the demonstration of the bacillus in the nasal secretion, and possibly by the absence of the bacillus in other parts of the body.

4. A leper in whom the diseased condition of the skin and nerves has remained stationary for years should only be considered free from danger to his neighbors when the primary affection in the nose has completely healed.

5. An intelligent treatment for leprosy consists in the destruction or obliteration of the nasal disease as the first and most important measure; then experience shows that all the secondary manifestations of the disease have a spontaneous inclination to recover, even those that have shown extraordinary obstinacy.

The Relative Intensity of the Second Sounds at the Base of the Heart—A Study of One Thousand Cases.

S. R. Creighton (*Medical Record*, Jan. 13, 1900), from the study of one thousand cases, draws the following conclusions:

1. Accentuation of the pulmonic second sound is almost invariable in young children and frequent in youth.

2. After the fortieth year of life the reverse is the case, and it is then rare to find a pulmonic second sound as loud as the corresponding aortic sound.

3. Between the ages of twenty and thirty years there is no marked accentuation of either sound.

4. In view of the above facts it is obvious that when one speaks of an accented pulmonic second sound as corroborative of a diagnosis of heart disease, such accentuation must mean an increase in the loudness of the sound over that normally to be expected at the age of the patient in question. A comparison with the aortic second is not sufficient to settle the question.

5. Further, when we speak of an aortic second sound as accented, we must mean (in case of patients over forty years) more accented than it normally is. Once more, the simple comparison with the pulmonic second sound will not settle the question. The comparison must be with an ideal standard carried in the mind.

6. In interpreting the meaning of an accentuation of the pulmonic second sound in suspected mitral stenosis, one must bear in mind the age of the patient. The presence of a pathological accentuation of the sound can be determined only in relation to the degree of accentuation which is to be expected at the age of the patient in question.

Typhoid Fever in the Young.

A. Jacobi (*Pediatrics*, Dec. 15, 1899) says that the severity of this illness need not correspond with the body temperature. The condi-

tion of the lips, the tongue, and the mouth may depend on previous catarrh, angina, or the presence of adenoids—otherwise on the severity of the typhoid—and exhibits the same surface changes of epithelium and mucous membranes that are observed in the adult. The irregular respiration of nervous or frightened infants or children, their tympanitic colon and high diaphragm, possible exudation in left pleura or lung, and the struggle against examination, whether painful or not, render the diagnosis of the condition of the spleen difficult. The nasal mucous membrane is as a rule covered with a thin crust, and irritated, like the lips, which are in a similar condition. The urine is mostly of a high color, contains at the beginning much urea and uric acid, less chlorides than normal, indican, sometimes albumin, frequently at an early period and more so at the height of the disease, renal epithelia, blood, thin granular casts, and occasional bacilli. The tendency of the skin is to be dry. The bones suffer in different ways. The characteristic increase of growth after infectious fevers is mostly observed in scarlet and in typhoid fevers. Friedland placed the greatest frequency of typhoid in childhood between the fifth and eighth year. The diagnosis in infants, as can be seen from the foregoing symptoms, is a very difficult matter. The character and mortality of typhoid fever in the young is apt to vary according to seasons and epidemics.

In regard to the treatment Jacobi says the food should be liquid, and the patient should be encouraged to drink water frequently. The admixture of from eight to twelve drops of diluted hydrochloric acid in a tumblerful of water or sweet water is a pleasant and disinfectant drink. Purgative doses of calomel in the very beginning will act beneficially; not so after the second half of the first week, when diarrhea and hemorrhage may be caused by it. Collapse requires strong stimulants by mouth and subcutaneously. Antipyrin is a safer drug to use than acetanilid as an antipyretic.

The Home Treatment of Consumption.

Wm. Osler (*Maryland Medical Journal*, January, 1900) says he gives to his patients the following directions in regard to the open-air treatment of this affection: Take the almanac and count off the hours of sunshine. In winter cut off two hours in the morning and an hour in the evening, and for the rest of the day the patient is to be out-of-doors. If there is no possible arrangement for life out-of-doors, the patient is to be in a room with a southern exposure with the windows wide open. The bed is to be moved into the sunshine. If there is a balcony or a veranda with a good outlook towards the south, it should be arranged for the patient; if not, a sheltered protection can be put

up in the yard at a very moderate cost. On a well-padded lounge, covered with a couple of thick blankets, well wrapped up, the patient sits or reclines all day, coming in only to attend to the calls of nature. Only on blustering, stormy, or very rainy days is the patient to remain in the house. No degree of cold is a contraindication. This continuous open-air life, at rest, is the most powerful influence we possess to-day against the fever of tuberculosis. It may take a month, it may take two or even three months, before the temperature reaches normal, but it has been one of the many valuable lessons which we have learned from Dr. Trudeau, that in the fever of consumption the patient should not only be out-of-doors, but at rest, taking no exercise. The bedroom of the patient should be thoroughly ventilated, and the patient should be accustomed gradually to sleep with the window open.

Dilatation of the Stomach.

From the study of a number of cases of a tonic dilatation of the stomach, J. H. Musser and J. D. Steele (*American Journal of the Medical Sciences*, February, 1900) conclude:

1. The symptoms upon which most reliance can be placed in determining the presence of gastric motor insufficiency are: (*a*) The presence of fluid and food in the stomach fasting over night; (*b*) the ready entrance of fluid through the tube and difficulty in the return flow; (*c*) the absence of visible gastric peristalsis; (*d*) evidences of fermentation and intoxication by the products thereof; (*e*) thirst; and (*f*) scanty and concentrated urine.

2. In determining the position and size of the stomach, by far the most certain method has been inflation by air through the stomach-tube; auscultatory percussion, Dehio's method, and determining the capacity of the stomach by the amount of water required to produce a sense of fulness, while signs of value may, lead to error.

3. An analysis of the etiological factors is as follows: (*a*) Myasthenia caused by chronic gastritis from the abuse of alcohol and tobacco, four cases; (*b*) myasthenia from deficient innervation, two cases; (*c*) myasthenia occurring in the course of acute disease, one case.

Some Notes upon the Tuberculin Test.

E. O. Otis (*Medical Press and Circular*, Dec. 20, 1899) summarizes his experience as follows:

1. The tuberculin test indicates early tuberculosis by a general reaction in the majority of cases before it can be detected by other methods, the *x*-ray excepted.

2. The dose to accomplish this is from five to ten milligrammes of Koch's tuberculin.

3. No injurious results occur from the use of tuberculin in these doses.

4. Proved tuberculosis in a more or less advanced stage may fail to give a general reaction with doses of ten or twelve milligrammes.

5. Syphilis gives a reaction in an undetermined proportion of cases.

6. A non-tuberculous person may give a general reaction with a dose above the maximum used in the test.

7. The reaction may be delayed from six to twenty-four hours.

And as rules to be observed in making the test:

1. Always use the same tuberculin and of a standard strength.

2. Use aseptic precautions in giving the injection.

3. Make the injections deeply into the muscles.

4. Keep a two-, three-, or four-hour chart of the temperature if possible, beginning twenty-four hours before the injection.

5. Allow several days to elapse before repeating the test.

6. In early cases depend upon the general reaction; in later cases, if the general reaction is wanting, carefully look for the local.

THERAPEUTICS.

Gelatin as a Hemostatic.

Bauermeister (*Medical Press and Circular*, Jan. 24, 1900) reports a case of almost fatal epistaxis cured by injections of a solution of gelatin. A woman, aged sixty-eight, bled so profusely and continuously in spite of all ordinary measures that half a liter of physiologic solution had to be injected subcutaneously. The following treatment was then carried out: Syringing of the nasal cavity with warm saline solution to get rid of crust and blood-clot; then twenty to thirty grammes of warm fluid gelatin was introduced into the nose by means of a glass syringe with a wide nozzle, the alæ nasi being pressed upon the nozzle in order to prevent the gelatin at once running out again. After removal of the syringe the gelatin hardened quickly and the bleeding was arrested at once. He also reported a series of successful instances of the use of gelatin as a hemostatic. He used the gelatin internally in ten-per-cent solution in three cases of hemorrhage from the gastrointestinal canal, also externally in the form of tampon soaked in gelatin in several cases of epistaxis in which plugging had been unsuccessful, and in one case of profuse bleeding from the uterus, always with prompt and good results. In only one case—

hemorrhage from the lungs—did twenty to thirty grammes of gelatin daily fail to arrest the bleeding. The writer believes that it undoubtedly facilitates coagulation, and that when applied on the surface it can do no harm. As to its subcutaneous employment he acknowledges that not enough is yet known of its possible danger to encourage one to make a trial.

The Treatment of Chronic Endometritis.

W. P. Whittington (*Charlotte Medical Journal*, January, 1900) says that in the treatment of all forms of chronic endometritis everything possible should be done to improve the general health, build up the patient, regulate the menses, and establish equilibrium of the nervous system. While these things are of great importance they will seldom, if ever, effect a cure by themselves, for which we must rely on the application of local treatment along with general constitutional methods. A great many drugs, some of them in highly caustic strength, have been used as applications to the diseased mucous membrane, with some degree of success, but have often done great harm by substituting an unhealthy cicatricial tissue for the inflamed endometrium. The writer prefers the use of a solution of nitrate of silver, varying in strength from two to twenty grains to the ounce, or a solution of one of carbolic acid to two of tincture of iodine. The tough mucus should be removed from the cervix with a suction syringe or small curette, and the application made with a small piece of cotton on an applicator. A tampon of cotton or wool, saturated with tannate of glycerin, should be applied, which should remain twenty-four or forty-eight hours, at the end of which time the tampon should be removed and the vagina flushed with an abundance of hot water, following with a solution of boracic acid one teaspoonful to the quart. This should be kept up once or twice a day between the treatments, which should be repeated every four to eight days.

Ichthalbin as a Substitute for Ichthyol.

Samuel Wolf (*Merck's Archives*, January, 1900) says that he has found ichthalbin to be non-toxic and non-irritant to the stomach, admitting on this account practically unlimited dosage. It is an intestinal antiseptic, a stomachic tonic, and an aid to constructive metabolism. It has no odor and almost no taste, properties which make it easy of administration without combination or disguise. Wherever ichthyol is indicated for local use, but where a dry, odorless powder is more easily applicable or otherwise preferable, ichthalbin should be used. Whenever ichthyol is indicated internally,

ichthalbin should be preferred, because it will not cause eructation, will not nauseate, and is more pleasant to the taste, and on account of these qualities and its innocuousness can be administered in more efficient doses. In phthisis, secondary and tertiary syphilis, chronic rheumatism, and septic and pyemic conditions, ichthalbin may be considered among the most available drugs. In all conditions of mucous membranes where hyperemia, increased and perverted secretion, or suppuration appears, ichthalbin is a decidedly efficient agent. In florid and inflammatory dermatosis it is among the best internal remedies.

Iron Hematopoietic Influence.

Iron is absorbed into the system from the small intestine and excreted by the lower bowel. From numerous experiments conducted with old and tried ferruginous preparations, Hofmann, of Halle (*Munch. Med. Woch.*, 1899, No. 29), concludes that organic iron is to be found in spleen, liver, and especially in the cells of bone-marrow, where it stimulates the development of red blood-corpuscles into anuclear erythrocytes. He further determined that the modern ferruginous preparations are not any more active than the older ones, and that the exhibition of so-called hemoglobin compounds is, to say the least, irrational, since results are entirely commensurate with the ponderable amount of iron taken up in the system. Hofmann ascribes chlorosis to a temporary giving out, or again to a congenital hypoplasia, of hematopoietic organs, manifesting itself at puberty by the formation of physiologically defective and pathologically modified erythrocytes.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Diagnostic Significance of an Affection of the Epiglottis in Typhoid.

Kobler (*Wiener Klin. Rundschau*) from an observation of three cases calls attention to the importance of a systematic examination of the larynx and the determination of a characteristic affection of the epiglottis in the diagnosis of typhoid fever.

In two cases a diagnosis had been made simply from the appearance of characteristic infiltration and ulceration of the epiglottis before the appearance of any other symptoms typical of typhoid. In the third case, in which the type of fever had led to the diagnosis of malaria, and in which the plasmodium malariæ had been found, the laryngo-

logical examination discovered the combination of typhoid with the malaria, and the further course of the disease confirmed the diagnosis.

Also from a prognostic standpoint is the observation of the larynx affection of value. So long as infiltration of the epiglottis exists, the entire typhoid process continues active in the blood, while with its disappearance one can be certain that the general condition is subsiding.

Finally, a knowledge of the scar tissue left behind after typhoid ulceration in the larynx is important, because such a scar might be confused with that of other and notably syphilitic processes.—*Centralbl. für Innere Med.*, No. 1, 1900.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Hernia Following Abdominal Operations.

A. Lapthorn Smith (*British Gynecological Journal*, November, 1899) sums up a paper on this subject as follows:

1. Hernia is a frequent complication following abdominal section.

2. When it occurs it prevents other women from undergoing a needed laparotomy.

3. It is quite preventable: (*a*) By leaving in the stitches for one month if the woman is thin enough to allow us to use through-and-through sutures, or (*b*) by using non-absorbable buried ligatures when the woman is fat enough to require two layers of sutures; silkworm-gut by placing it in sealed glass tubes and boiling it; (*c*) by discarding the abdominal drainage-tube, and when drainage is necessary, which it rarely is, draining through the vagina; (*d*) by securing accurate coaptation of the cut edges by marking the places where the sutures are to go before the incision is made; (*e*) by taking care that no peritoneum is curved up so as to come between the muscle and fascia of opposite sides.

4. Hernia is easily cured in small cases with a single buried silkworm-gut purse-string suture, and in larger cases by splitting the edges of the ring until the recti muscles are exposed from top to bottom, and suturing them with buried silkworm-gut.

5. Patients with buried silkworm-gut stitches do not need to stay in bed more than two weeks, and in some cases less; and they do not need to wear an abdominal belt.

6. Patients with through-and-through silkworm-gut stitches left in for a month can, in case of necessity, go home in twelve or fifteen days, and return at the end of four weeks to have their stitches removed. They do not need to wear a support until the stitches are removed, and even then it is much less necessary than in patients whose stitches have been removed early.

Uterine Carcinomata; Treatment of Inoperable Cases.

V. Herff (Gynecological Section of the 71 Vers. D. Naturf. und Aerzte, in *Munch. Med. Woch.*, No. 44, p. 1478) considers hysterectomy to be the best palliative treatment. If too far gone he recommends Sanger's method of thermocauterization of the cervix. The indications to be met are prevention of hemorrhage and ulceration, which object is best attained by curetting and cauterizing. Curetting alone will often secure quite as good results. Particular stress should be laid upon subsequent application of caustics, preferably chloride of zinc, which is to be made on the third or fourth day after curetting. Untoward effects of cauterization (hemorrhage, pain, fistulæ) can be avoided. After-treatment, by way of painting the cavity twice or three times a week with tinctura iodi co., is most important. Dry dressing applications are useful, but tinctura ferri chloridi should be avoided if possible. Hemorrhage is to be treated by local applications of tampons saturated in a five-per-cent solution of formol gelatin. However, the most reliable treatment of hemorrhage is based upon the formation of calcium hydroxide in the nascent state, which possesses astringent and slightly caustic properties. After disinfection the ulcerated cavity is dried, and small fragments of carbide of calcium introduced and held *in situ* with a light tampon. The application is to be repeated after two or three days. This induces a hardening and consolidation of the carcinomatous tumor, a cessation of hemorrhage and often of pain, at least when due to nervous degeneration. Pain traceable to compression of the nervous filaments is of course unaffected by the treatment.

May We Not Frequently Do Great Harm Rather than Good by Office Treatment of Female Generative Organs?

Under the above caption M. B. Ward (*Journal of the American Medical Association*, Jan. 27, 1900) enters a protest against indiscriminate office treatment of pelvic disorders. In every instance the most thorough examination should be made, and a knowledge of the conditions present obtained, in order that intelligent and scientific treatment may be inaugurated. In the majority of cases, when the trouble

can be seen through the speculum, only the application of soothing drugs is indicated. In those instances requiring frequent local treatment, the patient is often more learned in going to the physician's office than benefited by the applications. Such patients are better off in bed in a hospital or at home. Office treatment of the endometrium Ward considers a most dangerous procedure. When applications to the uterine lining are deemed necessary, the patient should be prepared as for operation, and the uterine canal completely dilated. Regarding the treatment of ovarian and tubal disease he says: "The application of medicine to the vaginal vault for diseased appendages is quite as scientific as it would be for us to wash our face in bichloride solution for the cure of postnasal catarrh."

The author also calls attention to the slovenly instruments used, and the dangers of septic infection from uncleanliness.

While the truths advanced in this article may not strike a popular chord, it would none the less be well for the general practitioner to heed the suggestions offered.

On the Etiology of the Nausea and Vomiting of Pregnancy.

D. J. Evans (*American Gynecological and Obstetrical Journal*, January, 1900) in a paper on this subject adduces the following:

There exists more or less of a rhythm in the paroxysms of nausea and vomiting in pregnancy.

There must also exist a rhythmical exciting cause for these paroxysms.

There is a rhythm in the contractions of the uterus which occur throughout pregnancy.

The essential exciting cause of the paroxysms of nausea and vomiting of pregnancy is frequently the physiological contraction of the muscular fibers of the uterus.

It is probable, says the writer, that the beneficial effects of nerve sedatives in the treatment of this distressing condition are obtained not so much by inhibiting the uterine contractions as by soothing the irritable nervous system and thus controlling the reflex.

Etiology of Urethral Prolapse in the Female.

Meyer (*Archiv f. Gyn.*, Bd. 59, H. 3, 1899), whose experience coincides with that of Sipala, places the child-bearing act as a most important predisposing factor in the production of urethral prolapse in women. In a case reported the condition occurred three and a half weeks after labor. Repeated deliveries undoubtedly lead to a loosening of the urethral attachments and to a subsequent greater or less

rolling out of the mucous membrane through the meatus. The treatment consists in the cauterization of the redundant tissue ring at the meatus or its ablation with the knife, the cut surfaces being united by catgut sutures. In Meyer's case, which was recent, the application of the ice-bag was sufficient to permanently cure the condition in a few days.

In the urethral prolapse of young girls Kleinwadeter believes a scrofulous diathesis to be the predisposing cause, but in a case recorded by Meyer this diathesis was absent, the urethral prolapse following undue exertion. The patient, a twelve-year-old girl, suffered from spinal curvature, and was under treatment by suspension when the disorder became manifest.

Hernia in Pregnancy and Pregnancy in Herniæ, with Note on Umbilical Hernia.

Manley (*Medical News*, Jan. 27, 1900) presents an able consideration of the above subject, the condition being of more frequent occurrence than is usually supposed. Maternity and exomphalos, strangulation and the pregnant state, and herniated conditions in the female are treated of, and two cases reported, with an illustration "before" and "after" operation. The subject is one of exceeding interest, not only to the specialist but also to the general practitioner, and it is unfortunate that as presented by the writer it does not permit of satisfactory abstracting. The reader is therefore referred to the original article.

Early Diagnosis of Pregnancy.

R. von Braun, of Vienna (*Wiener Klin. Woch.*, 1899, No. 10), lays particular stress upon the shape of the pregnant uterus, one-half of which enlarges to such a degree that about the end of the first or the beginning of the second month it may feel twice the size of the other, while at the same time it presents a noticeably softer consistency. The softening encroaches beyond the median line, which is itself often marked either along both surfaces or sometimes along the anterior aspect only by a plainly discernible perpendicular sulcus. In many cases the fundus uteri, moreover, feels irregular to the touch and presents a slight saddle-shaped indentation.

Blistering in the Vomiting of Pregnancy.

Dr. Donald McKay, Houston, Texas, says: "Blistering over the fifth dorsal vertebra for hyperemesis gravidarum, as taught by Parvin, has given me most excellent satisfaction. I believe it should be given the prominence of a specific. The mode of applying the remedy is of as much importance as the treatment itself."

THE MEDICAL AGE

VOL. XVIII. DETROIT, MARCH 10, 1900. No. 5.

ORIGINAL CONTRIBUTIONS.

A BRIEF SUMMARY OF THE METHODS OF HOSPITAL TREATMENT OF TYPHOID FEVER.*

BY FRANK S. JOHNSON, M.D., CHICAGO.

The hospital treatment of typhoid fever has at all times furnished the data upon which the usual treatment at different periods has been based. The large number of cases aggregated in hospitals gives the best opportunity to judge of the degree of virulence of the disease, and furnishes the opportunity to apply therapeutic measures and to judge of their respective values. The data obtained from individual cases are, of course, valuable, but the normal course of the disease is so variable in different subjects that the results are misleading. Even carefully compiled hospital reports upon special plans of management may be deceptive unless parallel series of cases under expectant management, in the same year and under otherwise similar conditions, can be observed for comparison. Such data for comparison are, however, rarely obtainable.

The disease presents so many and so complex problems to the therapeutist that he is led to accept some one phase as the salient feature, and to bend his energies in that direction in combating the disease.

The hospital treatment of typhoid fever at the present day may be classed under three general plans: (*a*) Expectant; (*b*) intestinal antisepsis; (*c*) heat reduction.

It is universally recognized that none of these plans alone is fully adequate. The invariable practice, therefore, is a blending of two or all of these methods.

*Read before a joint meeting of the Chicago Medical Society and Chicago Society of Internal Medicine, Jan. 31, 1900.

The expectant plan is a partial acquiescence in the inevitable. No radical measures are taken to influence the course of the specific disease. Attention is directed entirely to the preservation of the strength of the patient by careful feeding, tonics, and stimulants, and to guarding him, as far as possible, against intercurrent and complicating disease. Under this treatment the disease probably runs a nearly natural course. In practice, however, pure expectant treatment is seldom followed; measures belonging to more radical plans of treatment have always seemed indicated in occasional cases. This was especially the case in former times with no idea of specifically influencing the disease, as, for example, the frequent administration of calomel and of turpentine.

At Brisbane Hospital, Australia, during the years 1882 to 1886 inclusive, 1828 cases were treated, with 271 deaths, a mortality of 14.8 per cent.

At Johns Hopkins Hospital prior to 1890—that is, prior to the inauguration of hydrotherapy—thirty-three cases were treated, with a mortality of 24.2 per cent.

Murchison's statistics record 27,051 cases, with a mortality of 17.5 per cent.

Jaccoud's statistics record 80,140 cases, with a mortality of 19.23 per cent.

Vienna statistics show 17,000 cases, with a mortality of 22.5 per cent.

In the Munich garrison from 1841 to 1860 a mortality of 21 per cent is recorded, but the number of cases is not given.

New York Hospital statistics from 1875 to 1880 show 1305 cases, with a mortality varying from 20.1 to 30 per cent.

In the German Hospital, Philadelphia, in 1894 and 1895, twenty-seven cases were treated, with a mortality of 18.5 per cent. This was prior to the employment of hydrotherapy.

Prince Alfred Hospital, Sydney, Australia, reports a series of 500 cases with 88 deaths, a mortality of 17.6 per cent. The diet was milk and beef tea, and the treatment employed, calomel early and mineral acids later in illness.

Presbyterian Hospital, New York, 1898: Thirty-eight cases; mortality, 9.1 per cent.

Westminster Hospital: 1895, 34 cases, mortality 5.88 per cent; 1896, 35 cases, mortality 11.4 per cent.

St. Bartholomew's Hospital: 1896, 119 cases, mortality 15 per cent; 1897, 149 cases, mortality 11.4 per cent; 1898, 141 cases, mortality 11.3 per cent.

Armory Hospital, Ironwood, Michigan: 1893, 92 cases; mortality, 13 per cent.

Kiev Military Hospital: 1888 to 1897, 2887 cases; mortality, 12.4 per cent.

Indiana, reported by Trent: First series, 100 cases, mortality 14 per cent; second series, 100 cases, mortality 12 per cent.

Continental hospitals, reported by Loomis-Thompson: Mortality, 16 to 25 per cent.

Massachusetts General Hospital: 1821 to 1829, 106 cases, 13 deaths, mortality 12.2 per cent; 1829 to 1839, 305 cases, 36 deaths, mortality 11.8 per cent; 1839 to 1849, 360 cases, 40 deaths, mortality 11.1 per cent; 1849 to 1859, 318 cases, 51 deaths, mortality 16 per cent; 1859 to 1869, 301 cases, 48 deaths, mortality 15.9 per cent; 1869 to 1879, 355 cases, 58 deaths, mortality 16.6 per cent; 1879 to 1889, 793 cases, 127 deaths, mortality 16 per cent; 1889 to 1899, 1000 cases, 135 deaths, mortality 13.5 per cent. Total, 3538 cases, 509 deaths, average mortality 14.3 per cent.

St. Charles, Missouri: Epidemic in 1898; 161 cases, 14 deaths; mortality 8.7 per cent, under expectant treatment chiefly.

It will be seen from the above data that a very wide range of results is obtained under the expectant plan. These differences probably may be attributed chiefly to the variations in the severity of epidemics, and perhaps to the quality of nursing.

The plan of treatment by intestinal antisepsis was the natural deduction following the discovery of the specific cause of the disease. The idea seemed to be one of great promise; in practice, however, difficulties of insurmountable magnitude have loomed up.

In the selection of an antiseptic several problems present themselves:

(*a*) The antiseptic should be one which will destroy the specific germ, together with the associated pathogenic and saprophytic organisms.

(*b*) One which will be locally harmless to the tissues.

(*c*) One which will be non-toxic to the patient.

In the attempt to secure an agent which would fulfil these conditions, a new and hitherto unreckoned pathological factor presented itself. The infection was not confined to the contents of the alimentary tube, but the intestinal walls, the lymphatics, the blood, and in fact all the fluids and tissues of the body were infected to a greater or less degree.

Still another desideratum was sought for, but so far unsuccessfully —namely, an agent which after absorption and solution in the juices of the body might still have a germicidal, or at least an inhibitory, influence upon the typhoid germs and others accidentally present.

Intestinal antisepsis, then, only imperfectly limits the quantity of

infection. It may be serviceable in this, and may be further serviceable in checking saprophytic growths in the alimentary canal and preventing complicating intoxications.

The plan of treatment has been almost invariably modified by measures to promote the evacuation of infectious and toxic material from the bowels.

Poona Station Hospital, 1896: Twenty-three cases were treated by carbolic acid and chloroform water, with a mortality of 4.3 per cent, and an average duration of the disease of fifty-seven days.

McCormick, of Williamsport, Pa., reports that from 1894 to 1897 one hundred cases were treated by calomel, guaiacol, and enemas, with a mortality of one per cent.

Arnaudet reports that in 1898 thirty-nine cases were treated by salines and nitrate of silver, two to three grains daily, with a diet of coffee and milk, in which the average duration of the disease was twenty-one days and the mortality 13 per cent.

D. Carbery, in a report of the epidemic at Maidstone, England, in 1897, states that 1885 cases were treated with boric acid, the dose not being given, and alcohol, fifteen to twenty ounces per day, with milk diet. The mortality was 7.5 per cent.

Antisepsis and elimination show the following results:

Armory Hospital, Ironwood, Michigan: Woodbridge treatment, 26 cases; mortality, 13.3 per cent. [Expectant treatment, 92 cases; mortality, 13 per cent.]

Presbyterian Hospital, Chicago, 1893: 22 cases; mortality, 18.1 per cent. Woodbridge method.

Woodbridge, J. E., Cleveland, Ohio, 1897: 7827 cases; mortality, 1.91 per cent — 113 cases of hemorrhage and 14 cases of perforation. The average duration of the disease is claimed to be twelve days.

Brennan has collected statistics of cases treated by the Woodbridge plan in 1888 in New York hospitals, military hospitals, and Fort Myer; he reports 92 cases, with a mortality of 7.7 per cent, which is nearly parallel with that reported from other methods of treatment at the same hospitals during the same period.

Thistle, of Toronto, details his treatment as follows: Salines, three grains of calomel a day in divided doses, five grains of salol every three hours, and water freely. He claims for this treatment a mortality of only two per cent.

Brennan, in comparing the results of the Woodbridge and Brand methods at Bellevue Hospital, concludes that the "patients under the Woodbridge did as well as under the Brand method;" "The symptoms subsided quite as promptly as under the use of cold baths;"

and "There was a noteworthy absence of complications" (20th Cent. Dict., xvi).

Hydrotherapy is perhaps most efficiently carried out by means of the bed bath or the tub bath. In the usual hospital practice tepid, cool, or cold spongings with friction, or the tepid, cool, or ice-cold pack, are relied upon in preference to the bath, in all excepting the most urgent cases.

The objects primarily sought by the external application of cold are: (*a*) Reduction of body temperature; (*b*) stimulation of the nervous system; (*c*) stimulation of respiration; (*d*) stimulation of circulation. The secondary objects are: (*e*) increase of the exchange of gases which is estimated to be proportionate to the reduction of temperature (Robin); (*f*) consequent increase in the oxidation of harmful products of tissue destruction and their conversion into less harmful excrementitious matters.

The results of the hospital treatment by hydrotherapy are as follows:

Johns Hopkins Hospital: 1890 to 1898, 652 cases, mortality 7.1 per cent; 1889 to 1890, mortality 8 per cent.

Red Cross Hospital, Lyons: mortality, 7.3 per cent.

German Hospital, Philadelphia, eight years: 741 cases; mortality, 7.42 per cent. The treatment consisted in calomel at the onset and baths. The patients walked to the bath when able.

Munich garrison: 1875 to 1882, mortality 6.3 per cent under bath and antiseptic treatment; 1860 to 1875, mortality 15.2 per cent under expectant and bath treatment.

Iowa Hospital for the Insane: First series, 28 cases, 7 deaths; mortality 25 per cent under intestinal antiseptics and tepid to cold baths. Diet, milk, beef tea, and broths. Second series, 15 cases, no deaths. Treatment, cold water, 100 to 130 cubic centimeters every three hours. Diet, malted milk and Mellin's food.

Cincinnati Hospital, 1897: 93 cases, 10 deaths; mortality, 11 per cent. Treatment, cold baths, calomel, antifebrin, and whiskey. In this series there were three cases of hemorrhage, two of perforation, and two of thrombosis.

Armory Hospital, Ironwood, Michigan, 1893: 92 cases; mortality 13 per cent, after expectant treatment and sponge bathing. Also 26 cases under Woodbridge treatment; mortality, 15.3 per cent.

Prince Alfred Hospital, Sydney, Australia: First series, 500 cases, 88 deaths; mortality 17.6 per cent, under calomel and mineral acids, baths as required. Diet, milk and beef tea. The condition of the bowels was normal in four per cent of these cases; diarrhea was present in 15.2 per cent, and constipation in 80.8 per cent. Second series,

166 cases, 20 deaths; mortality 12.047 per cent, under Yeo's quinine-chlorine treatment and cold baths. Diet, milk and beef tea.

Roosevelt Hospital, 1889 to 1899: 368 cases, 25 deaths; mortality, 6.8 per cent. Treatment, purge every third night for fourteen days, a diurnal of eighty grains each pepsin and bismuth, turpentine emulsion when tip of the tongue was dry, bath with friction when the temperature rose above 103°. Diet, milk and lime-water, and after the fourth week gruel, preferably of arrowroot.

Brisbane Hospital, Australia: 1887, 239 cases, 27 deaths, mortality 11 3 per cent; 1888, 339 cases, 23 deaths, mortality 6.8 per cent; 1889, 595 cases, 42 deaths, mortality 7 per cent; 1890, 160 cases, 16 deaths, mortality 10 per cent; 1891, 137 cases, 7 deaths, mortality 5.1 per cent; 1892, 104 cases, 7 deaths, mortality 6 7 per cent; 1893, 50 cases, 2 deaths, mortality 4 per cent; 1894, 79 cases, 1 death, mortality 1.3 per cent; 1895, 69 cases, 8 deaths, mortality 11.6 per cent; 1896, 130 cases, 10 deaths, mortality 7.7 per cent. Total, 1902 cases, 143 deaths, average mortality 7.5 per cent. After the institution of bath treatment.

Bellevue Hospital, New York, for six years: 104 cases; mortality, 9 6 per cent. Among the complications noted in this series are nephritis 1, recovery; laryngeal edema 1, death; parotitis 1, no suppuration; otitis 1; malaria 5; pregnancy 4, no abortions; exhaustion 3, deaths; perforation 2, deaths; pneumonia 1, death; hemorrhage 2, recovery. Treatment, baths in forty-eight cases; calomel, salines, antiseptics (turpentine, beta-naphthol, salol, bismuth subgallate), whiskey, strychnine.

Tyson, Hospital of University of Pennsylvania, 1896: 147 cases; mortality, 4.5 per cent. Diet, liquid. Treatment, few days, cold bath.

Stahl, St. Agnes Hospital, Philadelphia, 1896: 144 cases; mortality, 2.8 per cent. Diet, liquid; treatment, few days, cold bath.

Episcopal Hospital, Philadelphia, 1896: 153 cases; mortality, 8 49 per cent. Diet, liquid; treatment, few days, cold bath.

Pennsylvania Hospital, Philadelphia, 1896: 149 cases; mortality, 10.06 per cent. Diet, liquid; treatment, few days, cold bath.

Presbyterian Hospital, Philadelphia, 1896: 101 cases; mortality, 9.92 per cent. Diet, liquid; treatment, few days, cold bath.

A few instances of unusual management of typhoid fever are on record in the current literature.

Paget reports a series of 100 cases at Freemantle Hospital in 1897 with no deaths. The treatment consisted in the use of salad oil in large quantities, to which was ascribed a protective effect upon the mucous membrane of the bowel.

It is common practice in the majority of institutions to administer

alcohol: (*a*) In delirium; (*b*) when the tongue is brown and dry; (*c*) when the heart is feeble; (*d*) when the pulse is irregular and intermittent. In one series of cases, however, alcohol was used with unusual liberality.

At Maidstone, England, in the epidemic of 1897, 1885 cases were treated, with a mortality of 7.5 per cent. A milk diet was relied upon; boric acid was administered, and whiskey is said to have been given as a routine measure, in quantities varying from sixteen to twenty ounces per diem.

DIET IN TYPHOID.

It is the almost universal practice to administer only liquid or very soft food. In hospital typhoid fever dietaries milk is the chief article, and is supplemented by meat broths and juices, farinaceous gruels, soft eggs, etc. The articles of diet must occasionally be selected to meet the individual digestive capabilities. The apparent wisdom of adhering to the liquid diet rule is forced upon practitioners from time to time by the result of dietetic indiscretion during the height of the fever and in convalescence.

A few practitioners, more venturesome than the rest, have undertaken to disprove the need of the rigid precautions usually observed.

Bushuyev, military surgeon of Kiev, in 1895 and 1896 cared for eighty patients, using a liberal diet consisting of:

7 A.M. Tea with a roll.

8 A.M. Four hundred cubic centimeters of soft (liquid) oatmeal, barley, or wheat porridge, with butter.

9 A.M. One or two boiled eggs, soft or hard, as the patient desired.

10 to 11 A.M. A glass (200 to 220 cubic centimeters) of milk with a roll, one-half a cutlet, and a bit of boiled meat (160 to 168 grammes).

12 to 12.30 P.M. A plate (220 cubic centimeters) of chicken soup or a bowl of ordinary soup, sometimes with a bit of chicken from the soup and a small cup of kisel (a sort of sour jelly); rarely, a little preserved fruit.

3 P.M. Tea with a roll.

6 P.M. A cup of chicken or beef soup; semolina pudding or milk; a bit of chicken.

8 P.M. Milk with a roll.

During the night. Coffee or tea, with milk, two to four times; coffee with cognac.

Bushuyev's colleague, Dr. Sartsievich, cared for seventy-four patients in the same hospital during the same period on a diet of

two liters of milk and one or two eggs, soft-boiled, or in Stokes's mixture, during the twenty-four hours.

The results of these treatments compare as follows:

	Bushuyev. (Soft solid diet.)		Sartsievich. (Liquid diet.)	
Whole number of patients	80		74	
Recovered	72	(90%)	65	(87.8%)
Average day of illness on entrance into hospital	7.5		5.8	
Average day on entrance to division	8.4		8.3	
Day on which recovery was complete	49.5		55	
Number of days spent in hospital	42		49.2	
Days of fever in hospital	18.9		22.3	
Dismissed incapable of duty	6	(8.3%)	10	(15.4%)
Died	8	(10%)	9	(12.1%)
Average day of entrance to hospital	8.5		5.8	
Average day of entrance to division	9.1		8.4	
Average day of death	28.6		26.7	
Days between entry and death	20.1		19.4	

During 1897, under this diet, Bushuyev lost 26 out of 318 patients, or 8.2 per cent. The mean mortality from 1888 to 1897 from typhoid fever at this hospital was 12.4 per cent. Complications were not more frequent among the patients on this diet than among those on liquid diet.

Manges has recently reported a series of ninety cases in his service at the Mount Sinai Hospital in New York, in which a somewhat similar diet to that of Bushuyev was employed, and tabulates the following results: Total number of cases, 90; total deaths 11, mortality 12.2 per cent; total relapses, 14—15.5 per cent; total perforations, 4—4.4 per cent; total hemorrhages, 3—3.3 per cent. On liquid diet, 82 cases; mortality, 13.4 per cent; relapses, 14.5 per cent; perforations, 4.88 per cent; hemorrhages, 3.5 per cent.

It is claimed that the addition of soft solids to the diet list stimulates the appetite and maintains a better degree of nutrition; the typhoid state was less pronounced or was entirely aborted; neither complications nor fatalities were increased; and at the end of the illness the physical and nervous forces were better preserved.

It would appear from these data that many facts have been firmly established regulating the management of typhoid fever. There is still a broad field for investigation, and many details are as yet under judgment.

The confusion in results arises largely from the protean aspect of the disease; perhaps, too, the personal equation of the observer is an occasional disturbing factor in statistical reports. The following general conclusions may be drawn:

Under expectant—*i.e.*, nursing—treatment the mortality is nearly

twenty per cent, varying widely, however, in different epidemic or endemic conditions.

Under special attention to the septic conditions in the alimentary canal the mortality was reduced to two-thirds of the natural expectancy.

Under bath treatment, or bath and antiseptic treatment combined, the mortality has been reduced to about one-third of the natural expectancy.

DIABETES INSIPIDUS, WITH REPORT OF CASE.*

BY CARL WEIDNER, M.D.,

Professor of Physiology, Histology, and Clinical Medicine in the Medical Department of the Kentucky University, Louisville, Ky.

A case of diabetes insipidus which occurred in my private practice during the past year, and which offered several interesting features, leads me to make a short report of the case and to enter upon a general consideration of this rather obscure affection.

On May 16, 1899, I was consulted at my office by Mrs. L——, aged twenty years, living in the country about four miles from the city. Her principal complaints were occasional general headaches, particularly, however, frequently recurring neuralgia of the supraorbital branch of the fifth nerve; increasing muscular weakness; emaciation; great thirst; and the passage of a very large quantity of urine, which was a source of great annoyance to her at night. Slight occasional day cough was also complained of. The anamnesis and examination brought out the following points and conditions:

Father died of accidental drowning; mother living, in good health, at the age of forty-five; two brothers and one sister living, in good health; one brother died of cholera infantum; grandparents were old people. There was no history of any special dispositions to disease. Patient had no particular diseases other than those common to childhood, except malaria. Lues could be excluded. She never suffered any nervous shocks of any kind and never presented any neurotic symptoms. She had been married seventeen months. Menstruation started regularly at fourteen and kept up normally to about a year ago, when it ceased for five months, and later again for three months. She was never pregnant. Within two years she had lost about twenty-five pounds in weight and lost strength. About two years ago she began to be troubled with frequent unquenchable thirst, which she tried to satisfy by drinking a large amount of water; and she noticed also that she passed large quantities of urine of a light color.

* Read before the Louisville Clinical Society.

At the time of the first consultation she and her mother stated that she emptied almost a bucketful of drinking-water, and that she passed from three to four gallons of urine in the twenty-four hours, at frequent intervals, causing a much interrupted sleep. Her appetite was good and great, and she felt hungry often; bowels were constipated; she perspired freely during warm weather. Her skin was clear, rather pale; there was no eruption of any kind; cheeks a delicate pink; mucous membranes rather pale; temperature normal; pulse 80, small, of rather low tension, regular as to time and rhythm. Heart sounds normal; respiration 18, apparently normal; no nervous symptoms except as stated above. There was no edema of the extremities, and no abnormal signs except those mentioned.

She was requested to bring a sample of her urine for examination. One and one-half gallons of very clear urine was passed during the night. Specific gravity 1002, color watery; odor nothing special, reaction neutral; no albumin, no sugar, no abnormal organized sediment (particularly no casts of any kind), urea one-half per cent. The phosphates seemed to be increased.

The diagnosis of diabetes insipidus was made, accompanied by deficient nutrition, moderate anemia, as principal conditions for treatment.

Under the general hygienic, dietetic, and medicinal treatment, as outlined later on, the patient seemed to me to make improvement within a few weeks. The pulse and color improved, and sleep was much better, as she would only have to drink water and pass urine in moderate quantities once or twice in the night.

On July 20 she called at my office, and I congratulated her on her apparent improvement and gave her a rather hopeful prognosis. Three days later (July 23, 1889) I was sent for in haste to see her at her home in the country. This was about 3 P.M. I found a very discouraging picture. The patient had an excited, nervous look, dilated pupils, pulse accelerated and rather full, respiration labored and irregular, sensorium dulled, stupor which had come on in the last few hours, lulling speech, hearing apparently not impaired as she would give evidence of hearing my questions. The bowels had not moved that day, and she had passed no urine since about 11 A.M. I ordered drop doses of croton oil and gave an order also for liquid ammon. acetatis, but owing to rapidly increasing stupor and inability to swallow she only got two doses of croton oil and none of the ammon. acetate.

At my next visit, at 8 P.M., she was comatose, the pulse was very rapid and weak, extremities cold and moist, an axillary temperature of 105° F., respiration labored, with small moist râles all over the chest,

inability to speak or to swallow, etc. Symptoms pointed very strongly to a lesion in the medulla oblongata near the region of the vagus center, an acute bulbar paralysis. Whether this was due to some toxic condition or, which is more probable, to hemorrhage in that region, I am unable to state.

Patient died at 11 P.M. the same day. A post-mortem examination could not be obtained.

There are three points of especial interest in this case:

1. The very large quantity of urine passed, being equal to one-fourth to one-third of the body weight.

2. The absence of the commonly noted dryness of the skin.

3. The unexpected termination in death after an apparent improvement, and the mode of death.

Diabetes insipidus belongs to the many dark fields in medicine. Very little is known about its etiology and pathology. It seems to be a neurosis with unknown uniform anatomical lesions, most probably a disturbance of the vasomotor system of the kidney.

The symptoms are chiefly recognized and characterized by polyuria, the urine varying in quantity from many quarts to gallons, being of light color, very low specific gravity (1000 to 1005 to 1007), containing no albumin, no sugar, as in diabetes mellitus, and giving no evidence of organic disease of the kidney. Frequency of micturition is increased according to quantity. The urine is of feebly acid or neutral reaction, and has a tendency to become easily turbid, partly from the phosphatic elements and partly due to bacterial development.

Urea, while proportionately diminished, is in most cases absolutely increased. The other solids excreted are mostly increased, particularly the phosphates. Inosite has been found by Mosler, and is supposed to owe its presence to the excessive washing out of the tissues, as F. Strauss succeeded in producing the same condition experimentally by administering to healthy individuals large quantities of water.

Polydipsia is an early and most noticeable concomitant subjective symptom, so much so that the disease has been called polydipsia. Thirst is often intense and hard to satisfy, in spite of frequent drinking. R. T. Edes speaks of cases where the craving for water was so severe that the patient in pure desperation drank the contents of the chamber-pot.

Nutrition later on is always more or less affected. There is a tendency to emaciation in spite of the large quantity of food taken. In my case, as in those quoted in literature, there was great appetite and often hunger, which really represents the hunger of the tissues, and might be called *le besoin de manger*, just as the French physiologist speaks of *le besoin de respirer*, the hunger for air of the tissues.

Trousseau tells of a patient who ate such enormous quantities that by a certain restaurant he was paid to stay away. The same story is circulated about one of our departed local physicians.

As Niemeyer suggests, this unusual hunger may be accounted for by supposing that on account of the accelerated flow of the juices of the parenchyma there may be an increased waste of the nitrogenized elements of the body.

The skin in many cases becomes very dry, and we may then have pruritus or different eruptions, as occurs so frequently in diabetes mellitus. In my case quoted there was even free perspiration.

Amongst the nervous symptoms headache is said to be the most frequent; different forms of neuralgia also occur, and periodical attacks of drowsiness. Debility is a frequent complaint. Eye symptoms occur in some cases, such as failing vision from cloudiness of the lens, or even atrophy of the optic nerve. In the latter case we ought to be particularly careful to exclude interstitial nephritis as well as syphilis. Many cases of the disease have been described as such which more likely belong to the organic diseases of the kidneys, particularly chronic interstitial nephritis and amyloid infiltration. A most interesting feature to me is the remarkable endurance of the kidneys. One would suppose that, being constantly called upon to dispose of such a large amount of fluid, they would invariably suffer, but such is rarely the case.

The etiology and pathology are very imperfect; nothing uniformly definite is known. Among the exciting causes are mentioned nervous shocks, psychical and mental, emotional, such as fright, grief, excitement, overwork, etc., and excessive drinking of water or other liquids. The disease has followed acute febrile diseases. In early life no age seems to be exempt. Heredity seems to furnish a potent disposition. Families in which mental diseases, epilepsy, and various neuroses occur furnish a larger number of cases.

Weil has recorded a group of cases in which, out of a family of ninety-one, twenty-eight were subjects of polyuria. The head of the family, a polyuric, lived to the age of eighty-three years, while his descendants were robust, many of them attaining a good old age. There were no anomalies of circulation, and the persons affected were not alcoholics. Their only complaint was troublesome thirst, and they declined treatment.

I know a gentleman in this city who for many years has drunk a gallon and a half of water in a day, and who passes a proportionate quantity of urine and enjoys apparent good health.

The artificial polyuria produced by puncture of the fourth ventricle in the medulla oblongata by C. Bernard is a well known physiological

experiment. Pathology in confirmation of this has shown that disease of or pressure upon this region gives rise to the same condition.

A variety of post-mortem changes of different character have been described, among them meningitis, tubercular meningitis, tumors of the brain, softening, spinal lesions, diseases of the suprarenals, etc.; in others nothing has been found that would throw any intelligent light upon the disease.

The onset of the trouble may be well defined or very obscure and gradual. Thirst, necessitating drinking of large quantities of water, is one of the earliest symptoms noticed by the patient.

The clinical course, the duration, and the outcome vary much in different cases. Much will depend upon the special cause and the effect upon the nutrition; the latter may remain good for many years or may become very deficient at an early period, favoring exhaustion or the development of diseases. While in many cases, after prolonged observation, a favorable prognosis may be given as to life, it must always be uncertain; the prognosis as to cure is bad. Much necessarily depends upon the individual behavior of the case, upon the surroundings and conditions of the patient, and upon the probable lesion in the nervous system. This point is brought out by my case quoted above. Four days before her death she called at my office in apparently better condition than at any time before, and still death came as described, unexpected by her family and myself.

The diagnosis of diabetes insipidus is made by the careful and repeated examination of the urine and by the symptoms described. Differential diagnosis will have to be made from other conditions having as a prominent symptom a polyuria, either temporary or permanent. Preeminent among these are diabetes mellitus, chronic interstitial nephritis, amyloid kidney, hydronephrosis, local disease of the lower genito-urinary tract which causes reflexly increased flow of urine, various functional nervous affections such as hysteria or organic disease of and injury to the nervous system, and lastly, the increased diuresis from diuretics. Diabetes mellitus can be easily and positively distinguished, the urine having a high specific gravity, mostly over 1025 (although I have seen a case of glycosuria lasting for a considerable length of time where the specific gravity was only 1012), and containing sugar in varying amounts.

Chronic interstitial nephritis is the disease which, more than any other, is likely to be confounded with this trouble, and which, on account of the importance, the different prognosis and treatment of the two diseases, ought to be clearly differentiated. At the same time this requires the utmost care and oftentimes repeated and careful examination of the patient and his urine, for in both we may have

similar general symptoms and similar conditions of the urine. Headaches, sleeplessness, digestive disturbances, and impairment of nutrition may occur in both; the urine is increased in quantity, of lower specific gravity, comparatively light color, in both. Still, the careful examination of the urine, both chemical and microscopical, in combination with some other things, will enable us to make a correct diagnosis.

In interstitial nephritis we have a specific gravity hardly as low as in diabetes insipidus; careful tests at different times will give a small quantity of albumin; the urea is diminished with more constancy, as well as the other solids; free uric acid is often found in small quantity, and not in diabetes. Hyaline and small granular casts will be found in the carefully prepared sediment almost at all times. Arteriosclerotic changes, the high tension pulse, accentuated second heart sound, and later on the cardiac hypertrophy with its strong apex beat, and the tendency to edema, will settle the diagnosis.

In amyloid kidney the matter is easier; the history, the presence of albumin and various forms of casts and corpuscular elements in the urine will be sufficient. Hydronephrosis gives only periodically large quantities of limpid urine, containing more or less cellular deposits from the pelvis of the kidney; besides, we have other signs—tumor, pain in the back, etc. The functional neuroses give mostly periodical or temporary polyuria, lasting only as long as the nervous symptoms are at their height; the large quantity of watery urine passed after a hysterical attack or after nervous excitement, fright, etc., is a good example. The temporary increase of the urine forms the most important point for differentiation. Organic diseases of the nervous system must be excluded by their special symptoms. The increased flow of urine due to reflex irritation by diseases of the lower urinary tract can hardly lead to a wrong diagnosis, if the case be carefully examined for local disease; and besides, the microscope will reveal the presence of cellular elements, blood, pus, etc., in the urine.

This subject has frequently given much trouble. I consider it one of the most important and often one of the most difficult problems to solve, especially in life insurance work, where we have no continued observation of the applicant but are frequently pressed by the over-anxious agent to rush in our report. We owe it to our own reputation and the interest of the company to postpone our final report until we have had time, by repeated examinations, at different periods, to come to a positive conclusion. The greatest trouble in this respect I have found with men who have been drinking large quantities of beer or wine, and then pass in your presence a big jarful of filtered "water." You cannot recommend such an applicant conscientiously

without a future examination, not to speak of men who habitually drink too much.

Treatment must include general attention to hygiene; proper attention to clothing, the hygiene of the skin, protection against bad external influences, etc. As in all neurotic cases the proper regulation between rest and exercise is very important. Much depends here upon the state of the nutrition, the condition of the circulation, etc. Short walks when the patient is not too feeble, and rides in the fresh air, are indicated in most all cases. For the general tonic effect, a generous, nutritious, mixed diet is indicated, the tendency being to impairment of nutrition. Gude's iron and strychnine were given my patient with apparent benefit, as they seemed to improve her anemia and the tone of the heart muscle.

One of the most tormenting symptoms is the excessive thirst and frequent craving for drinks. All the writers on this subject seem to agree that it is well to allow a liberal quantity of pure water in one form or another, and not to enforce much restraint, as too much restriction has been found not only to give dicomfort to the patient but also to increase the other symptoms and the emaciation. I think it desirable, however, to practice moderation by control of the will and to try to reduce the frequency of urination at night in order to give more rest to the patient. I think I have best succeeded by giving an evening dose of codeine, one-half grain, in combination with thirty grains of bromide of sodium or strontium. Other sedatives and nervines have been recommended by various writers, among them particularly opium or its derivative codeine, bromides, valerianate of zinc, etc. With the view to contract the renal arterioles ergot has been extensively used with apparent benefit. Galvanism along the spinal column seems to act well in some cases. Opium and gallic acid are recommended by H. C. Wood.

A CASE OF ENLARGED AND MISPLACED GALL-BLADDER CAUSING SYMPTOMS CLOSELY SIMULATING APPENDICITIS; CHOLECYSTENDYSIS; RECOVERY.

BY H. V. TUTTON, M.D., BENTON HARBOR, MICH.

On the evening of May 25, 1899, I was requested by Dr. B. G. Watson, of this city, to go with him about six miles in the country and see a case which he suspected to be appendicitis; symptoms of localized peritonitis centering over McBurney's point having developed within the preceding forty-eight hours, accompanied by muscular rigidity and a well defined, tender, intra-abdominal enlargement in the appendiculo-cæcal region.

As the symptoms were apparently grave and the patient unable to be moved, it was deemed advisable to go prepared to operate, if necessary. On arriving at the house a careful examination of the patient was made, and the following history elicited and conditions noted:

G. D. T——, male, aged fifty-three years. Had had albuminuria for past five years; for past year had been almost totally incapacitated for work; and for the past two years had suffered from occasional attacks of pain in right lumbar region, each attack lasting for a few days and being accompanied by slight icterus, giving rise to suspicion of cholelithiasis. About four days previously he had been attacked with severe colicky pains, following an attack of obstinate constipation, which, however, had yielded during the next twenty-four hours to salines and copious enemata. The thorough evacuation of the bowels had been followed by almost complete relief for the next forty-eight hours, when he had a chill, accompanied by rapid rise in temperature, and the development of localized pain and tenderness in the right iliac region. An examination at that time revealed a tender, doughy, intra-abdominal mass in the region of the appendix, and the pain, tenderness, and swelling had gradually increased ever since.

At time of present examination there were no symptoms present pointing to any disorder of the liver or adnexa; skin was pallid, inclining to sallowness; facies indicative of abdominal pain; muscular rigidity in right inguino-lumbar region; deep tumefaction in same region, extending from two inches below to same distance above superior iliac spine; exquisite tenderness centering at McBurney's point; pulse 95; temperature 102.3°. Bowels had moved three times in preceding twenty-four hours after use of saline.

A diagnosis of probable appendicitis was made, and on account of the rapid development of symptoms immediate operation was advised. Consent having been obtained, the patient was rapidly prepared for operation.*

An incision four inches long was made over the most prominent part of the tumor, and in the direction of its long axis. On incising the peritoneum no pus was found, though evidences of acute inflammation were present. Careful dissection uncovered a cyst, closely adherent to both parietal and visceral peritoneum, lying parallel to the internal surface of the ascending colon, its lower extremity being in line with the lower border of the cæcum and having the appendix curved inward, around, and closely adherent to it. After separating

*NOTE.—This was at 11.45 P.M., and the operation was done by the light of three kerosene lamps; a concave forehead mirror being used to concentrate the light directly on the field of operation.

the appendix and all adhesions from its lower portion the cyst was carefully raised and freed from lateral and posterior adhesions as far as the upper extremity of the opening in the abdominal wall, which had been extended upward and inward to within an inch of the lower costal margin.

It was evident that we had to deal with a greatly enlarged and elongated gall-bladder, which, when totally freed, was opened near the fundus, and fully eight ounces of a thick, tenacious, dark-green material about the consistence of molasses evacuated. This semi-inspissated bile was so full of fine crystals of cholesterin that wherever it touched it glittered and sparkled in the lamplight as though filled with diamond dust.

After emptying the gall-bladder the incision was enlarged sufficiently to admit the finger, and a thorough exploration of its interior was made in search of gall-stones, but none were found.

Examination was then made of the cystic, hepatic, and common ducts, but no abnormality was discovered.

A long probe was now passed through the opening in the gall-bladder and the duct found to be patulous.

As there was no evidence of obstruction, the opening in the gall-bladder was immediately closed by a double row of Lembert sutures, and that in the abdominal wall by three tiers of sutures.

Recovery was uninterrupted, and the general health of the patient has been very much better ever since.

The chief points of interest in this case were:

1. Symptoms of acute appendicitis present, and those pointing to the liver or gall-bladder absent.
2. Position of the gall-bladder and its intimate relation to the appendix.
3. Length of the gall-bladder (6½ inches after emptying).
4. Character of contents of gall-bladder.
5. Absence of obstruction in cystic, hepatic, or common ducts.
6. No involvement of appendix.

It is true that the enlarged gall-bladder might have been found by careful examination previous to March 20, but no such examination had been made, and its first discovery a day or so prior to the operation, masked by the symptoms of peritonitis, was to say the least misleading.

While the operation was fully justified, and the results obtained were excellent, this case simply emphasized the fact that an enlarged and misplaced gall-bladder with accompanying circumjacent inflammation may give rise to symptoms closely simulating appendicitis.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

DURAL INFUSION.

Those on the alert for new therapeutical devices will find that interest attaches to a communication recently made by Jakob to the *Berliner Verein f. Innere Medicin*, in which he reported some clinical and experimental results from infusions into the dura mater.

The lumbar puncture of Quincke has proved a valuable aid in diagnosis, though its therapeutical importance has been found disappointing. Jakob has endeavored to make an improvement on lumbar puncture by adding to it dural infusion. There is nothing particularly new in the infusion of therapeutic agents into the dural sac. Von Leyden did this as long ago as 1866, introducing quantities of albumen and salt solution into the cranial cavities of dogs. Naunyn and Schreiber modified these experiments by trephining the vertebral bodies of dogs and then making the infusion, but with all these experiments there occurred a train of symptoms which Von Bergmann designated brain-pressure signs. Jakob's method of dural infusion has been designed with a view of overcoming the dangers of brain-pressure. He injects a medicinal solution only after withdrawing the liquor cerebrospinalis. The injection, in order to avoid bad results, must be done so slowly that fifteen minutes is required for the introduction of twenty-five centigrammes of the fluid. With the observance of this precaution the animals bore the operation without any bad results.

Before using this method in man Jakob decided that it was necessary to determine whether the injection fluid passes simply into the subarachnoid space, or whether it remained long enough in the spinal canal to be of value. He determined this question affirmatively by using colored solutions for injection purposes. The cases best adapted

to treatment by dural infusion are, of course, those in which it is important to bring medicinal agents as quickly as possible into contact with the central nervous system, such especially as tetanus, meningitis, and cerebral syphilis, also neuroses without any anatomical basis, and finally such general diseases as those in which it is desirable to do away with the sensory functions. Tetanus naturally seems the most promising disease, as the poison is chiefly found in the central nervous system, and as heretofore little benefit has resulted from subcutaneous injections. Jakob reports one case of puerperal tetanus having been cured by this method. The chances for recovery in this case had appeared very unfavorable. After the second infusion an improvement occurred and complete recovery took place. Each application of the infusion was followed by a rise of temperature apparently as a result of the direct irritation of the heat centers. One case in which dural infection has been tried, and in which no result was apparent, has been reported by Schuster; one case by Schultze in which improvement occurred after the second injection; three cases by Heubner without any result; and a few cases reported by Sicard and Martin with good results.

Jakob has also tried this form of treatment in cases of syphilitic disease of the central nervous system. He treated three cases by infusing weak solutions of iodine. His first case was one of syphilitic history, in which the patient had lain for seventeen days in a comatose state in the hospital. Dural infusion in this instance caused a temporary improvement. In a second case there existed paralysis of the eye muscles, a disturbance of speech, and weakness of the arms and legs, and after dural infusion the weakness of the limbs disappeared, though the other paralyses were not affected. In the third case dural infusion was repeated several times. After the third infusion the paralysis of the lower extremities was a little improved. While these results are not of a nature to permit of any very decided advantages being claimed for the procedure, the experiments of Bier, who had made cocaine infusions to obtain analgesia of the lower extremities, were so extraordinarily successful, showing that he could perform the most painful operation about the lower extremities without pain to the patient, that it may be proved there is a future place for dural infusion among recognized therapeutical expedients.

The profession should certainly recall Jakob's experiments, especially in cases of tetanus, where dural infusion may be expected to promote results at least equivalent to those which have been claimed for the treatment of this disease by intracranial injections of antitetanic serum.

EDITORIAL NOTES.

A Blow to the Weissman Theory.

The interesting series of biological studies now being pursued in the laboratory of the Naples Aquarium on the fundamental problems of cell life seem likely to demonstrate some striking results. Some of the more recent investigations appear to have given a death thrust to the elaborate theories of heredity propounded by Professor Weissman. Weissman's notion that the first division of the cell represented the separation of the body plasm and the germ plasm seems to be entirely contradicted by recent experiments. It has been shown that not only when the cell has divided twice, but four times, and even sixteen times, the separate cells if dissociated from the group can pursue a separate existence and become well developed organisms of the parent type. These discoveries cast such a new light upon many biological problems that we shall probably in the near future have to recast many of our doctrines of heredity. The bearing of these discoveries upon problems of transmissible disease will also be at once appreciated.

The Use of Carrier Pigeons in Medicine.

The suggestion is revived that carrier pigeons can be utilized in the practice of medicine with especial advantage to the country doctor. In country districts there is little doubt that these clever little birds would be a great comfort to those who may have in the house dangerous cases of sickness, in which some means of quickly reaching the doctor is desirable. A small quantity of medicine could even be transmitted in emergencies. These birds could certainly serve many of the purposes of the telephone in districts where such facilities are not available.

Wounded in War.

Speaking of the wounds inflicted by modern weapons, Mr. Jonathan Hutchinson says the term "wounded" will soon cease to have the significance it once had. The rapidity with which soldiers return to the ranks after injuries seems to show there is only one fatal part, the heart, and this might be protected with a breastplate.

ITEMS AND NOTES.

LOUISIANA is to have a new leper hospital.

INFLUENZA is evidently pandemic in Europe.

MORE acting assistant surgeons are wanted for work in the Philippines.

A NEW medical monthly, *The Stylus*, of St. Louis, Missouri, has appeared.

A DEATH from beriberi is reported from the Long Island Hospital, Brooklyn.

WOMEN are now admitted to membership in the Berlin Medical Society.

AN inmate of the almshouse in Scranton, Pa., recently had left him a fortune of $12,000.

THE plague is believed to have been arrested in Honolulu by the extensive fire in the oriental quarter.

THE Samaritan Hospital, Stockholm, has been left $30,000 as a legacy from Jennie Lynn Goldsmith.

THE physicians of Belgium are complaining bitterly of the overcrowding of the profession in that country.

THE Lord Lieutenant of Ireland has ordered an official inquiry into the cause of the excessive death rate in Dublin.

A YOUNG man in Toronto recently lost his life as the direct result of picking an acne point on his face. Death was due to septicemia.

AN attempt is being made to rid Hot Springs, Arkansas, of the illegal practitioners and "sharks" who have infested it for many years.

DR. CONAN DOYLE, the well known novelist, has accepted a post as secretary and superintendent of a private field hospital in South Africa.

THE Chicago College of Physicians and Surgeons has been leased by the University of Illinois for a term of twenty-five years at $12,000 a year.

FIVE THOUSAND DOLLARS was found in the clothing of a charity patient who died a short time ago at the Baptist Hospital in Chicago.

THE Chicago Citizens' Committee, which has in charge the erection of a hospital for the treatment of consumptives, has already raised $15,000.

PROFESSOR SCHENCK, late of the University of Vienna, has announced his intention to establish himself in America as a specialist in sex regulation.

A SHORT time ago there was born in Brooklyn a girl baby weighing only 2½ pounds, whose wrist measures 1⅞ inches in circumference and foot 1⅝ inches in length.

DEATHS from diphtheria are on the decrease in Ontario. It is thought that the better sanitation in the Province and the general use of antitoxin have resulted in the decrease.

DR. A. S. ASHMEAD, of New York, lately published a statement in one of the newspapers in that city to the effect that there are one hundred lepers at large in New York City.

AT the Paris Pasteur Institute a young crocodile has been inoculated with the strongest toxins without any appreciable effect, and he is now being used for the production of antivenene.

THE hospital ship *Missouri*, which sailed from Manila January 11 for San Francisco with a large number of sick and wounded soldiers, experienced very unpleasant weather during the trip.

DR. ERNST HAECKEL, professor of zoology in the University of Yena, has been awarded the Bressa prize, amounting to 9600 francs, for "valuable contributions covering the whole field of biological science."

A PERMANENT bureau of information of all kinds in regard to universities, colleges, and schools in other countries is a new feature that is about to be introduced into the French department of public instruction.

THERE occurred on February 3 in St. Louis the death of a Christian science believer. The autopsy revealed the fact that death was the result of a strangulated hernia, and could have been prevented had medical aid been sought.

THERE is at present a bill before the New York legislature to provide for the establishment of a State hospital for crippled and deformed children. An appropriation of $15,000 has been made for caring for such patients this year in some New York hospital.

A BILL has been drawn up and presented to the Government of Belgium by a large number of physicians aiming to suppress the diploma of dentistry and only allow the practice of dentistry to qualified physicians as a special branch of medical science.

RUSSIA has decided, says an exchange, to restrict the overproduction of doctors by limiting the number of students received for the freshman year, at various colleges, to a number ranging from 100 at Warsaw and Kasan to 200 at Kieff, and 250 at Moscow and St. Petersburg.

THE Back Bay district of Boston, an area a mile long by one-third of a mile wide, contains, according to an exchange, 401 physicians and surgeons and 109 dentists. Of the doctors, 271 have some specialty. The population of the district is 20,000. This gives a doctor for every fifty people.

TRIALS are being made at the present time in the Johns Hopkins Hospital of silver leaf as a dressing for burns. As it only adheres to the unbroken skin it affords a good protective dressing which can be renewed without causing pain. The silver leaf is held in place merely by retaining gauze bandage.

DR. W. S. HULBERT, of Winsted, Conn., writes the *Medical Record* that on February 3 he delivered a woman of her tenth child. The ten children, all delivered singly and at full term, were born within a period of exactly ten years, ten months, and ten days. In this last confinement the patient nearly lost her life from postpartum hemorrhage.

ACCORDING to the *Medical Record*, Drs. Ehlers of Copenhagen, and Cohnheim of Dresden, who made a careful study of leprosy in Iceland in 1894–95, have been requested by Prince George of Greece, the governor-general of Crete, to visit that island the coming spring to study leprosy conditions there. They will go in March and remain about three months, studying especially the origin and spread of the disease in the interior of the island, and making suggestions as to the best means of keeping it in check.

HENRY E. CRAMPTON, JR., an instructor in biology in Columbia University, has successfully accomplished what seems at first blush to

be the impossible. By the use of his knife on living, breathing nature, and then the grafting process, he has produced an amazing collection of monstrosities in the insect kingdom. In other words he has created two-headed butterflies, tandem butterflies, moths with two heads and no tails, some with two abdomens, others with two breasts and no backs, and all imaginable varieties. The grafting is done while the insect is in the pupal stage.

ACCORDING to a Vienna correspondent of the *Medical Record*, a blackmailing case with a humorous aspect has been occupying the attention of the criminal courts at Gratz. An elderly lady of great wealth one day received a letter saying that if she did not send the sum of 10,000 florins in small bank-notes the writer would work a fearful revenge by opening in her room a bottle containing the bacilli of various infectious diseases, which would certainly cause her death. The lady appealed to the police, who discovered the would-be blackmailer. A bottle found in his possession really contained bacilli, which the culprit, who is a medical student, had stolen from his professor's lecture-room. A sentence of eighteen months' hard labor will doubtless prevent this promising youth from further blackmailing enterprises.

ACCORDING to the *British Medical Journal*, at a recent meeting of the Société Imperiale de Médecine of Constantinople, Dr. S. Stainaliades presented an analysis of a work by Dr. Nicolas Lambadarios of the University of Athens. The book, which is written in Greek, deals with serum therapy, organotherapy, antirabic and antileprous treatment as practiced by the old Greek physicians. It is shown that in treating leprosy Galen used, not indeed antivenomous serum as some recent workers have employed Calmette's antivenene, but the flesh of the viper's body, which he thought contained the virus in an attenuated form. Mithridates, as every schoolboy knows, made himself poison-proof not only by taking antidotes of proportionate strength, but at last by combining in one all the antidotes known in his day. All his life he made experiments on himself and on condemned criminals; among the poisons against which he succeeded in making himself immune was that of snakes. For this purpose he added to his antidote the blood of animals which fed on venomous snakes, particularly Black Sea geese. Similar antidotes were used later by Attalus, King of Pergamus, by Andromachos, Nero's archiatrus, and by Galen. As regards rabies, the author finds an anticipation of the essence of the Pasteur treatment in Dioscorides, who advised persons bitten by mad dogs to drink the blood and eat the liver of the animal which had bitten them.

NEW PUBLICATIONS.

INTERNATIONAL TEXT-BOOK OF SURGERY.

An addition to the many excellent works already in existence dealing with modern surgery is afforded in the present volume. The aim of the authors has been to present a reliable text-book of surgery embodying a clear statement of the present status of surgical pathology, symptomatology, and diagnosis, as well as to give a detailed account of the reliable methods of surgical treatment. The first volume contains a review of the principles of surgery and deals with the experience of general surgery, it being the intention of the authors to devote the second volume to the various branches of special surgery. In the present volume there are a number of articles of special interest and significance. Dr. Ernst's contribution on Surgical Pathology is a very succinct and clear statement of the essentials of surgical pathological processes. Dr. Cabot's article on the Surgical Pathology of the Blood is also thoroughly modern and contains much information of which the every-day practitioner stands in need. The International Text-book of Surgery is destined to take rank among the best manuals dealing with surgical science.

The International Text-book of Surgery. By American and British Authors. Edited by J. Collins Warren, M.D., LL.D., and A. Pearce Gould, M.S., F.R.C.S. Volume I: General and Operative Surgery. With 458 Illustrations in the Text, and Nine Full-page Plates in Colors. Philadelphia: W. B. Saunders, 1900.

DISEASES OF WOMEN.

The speedy demand for a second edition of Dr. Dudley's treatise is a flattering testimony to the value of the work. In reviewing the first edition attention was called to many conspicuous merits in the manual of gynecology. The second edition contains most of the subject-matter of the first, and the changes which have been made have been designed to secure greater efficacy and completeness. An entirely new part of the work is formed by Part VI, which discusses very completely all the disturbances of menstruation. The chapters on cystitis and diagnosis also contain much new matter. The work is designed with a view of affording the practitioner and student ample information in all that pertains to this special section of medical science. The work will doubtless enjoy a continued popularity.

Diseases of Women. A Treatise on the Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, A.M., M.D. Second Edition, Revised and Enlarged. With 453 Illustrations, of which 47 are in Colors, and 8 Full-page Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co.

HISTOLOGY AND PATHOLOGY.

This text-book is a valuable addition to the subjects of histology and pathology, bringing, as it does, before the student in a clear and concise manner all the essential points in both branches. The book is profusely illustrated, and many original drawings have been added by the writers. The book is fully up-to-date in every way, and will be found a valuable aid to both student and practitioner.

Lea's Series of Pocket Text-books. Histology and Pathology. By John B. Nichols, M.D., Demonstrator of Histology, Medical Department Columbian University, and F. P. Vale, M.D., Assistant in Pathology, Medical Department University of Georgetown, Washington, D. C. In One Handsome 12mo Volume of 452 Pages, with 213 Illustrations. Cloth, $1.75 net; Flexible Red Leather, $2.25 net. Philadelphia and New York: Lea Brothers & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Hints.

The following are from the *International Journal of Surgery* for February, 1900:

After using iodoform, wash the hands in soap and water, and then rinse them in a little vinegar. This will entirely remove the odor.

When you first see a patient of a nervous disposition whose condition necessitates a disagreeable examination, waste some time in preliminary conversation. The examination will be made much easier if the patient has had a short time in which to get over the first agitation.

If you see a boy who has first developed incontinence of urine in advanced childhood, and especially if there is occasional difficulty in retaining the urine during the waking hours, you will do well to search the bladder, for these are often the first symptoms of the presence of calculi in boys.

When children complain of obscure pains about the joints and limbs, which are not due to diseases of the articulations, and are not relieved by antirheumatic treatment, antisyphilitic measures are indicated. In many such instances there is no history of syphilis on the part of the parents, but the success of the treatment tells its own story.

In the presence of cancer the patient is condemned to death, and the surgeon is the only man who can grant a reprieve, and sometimes a pardon. There will be more pardons than reprieves when we stop doing little operations for little cancers, and when we cease to keep patients under observation too long before making up our minds to interfere.

The Surgical Treatment of Acute Puerperal Sepsis, with Special Reference to Hysterectomy.

In a paper on this subject in the February issue of the *Medical Sciences* H. N. Vineberg says that puerperal sepsis is wound fever or wound infection, and wound infection in the female genital canal, as elsewhere, calls for surgical measures, such as free drainage, irrigation, and the removal with a sharp instrument of any débris or exudate that may form on the surface of the wound. These means

failing to accomplish the desired result, ablation of the diseased organ or organs as a *dernier ressort* is indicated.

In a given case of puerperal sepsis a thorough search is to be made of the whole of the genital canal in order to determine the site of the original infection. If this is situated in the uterus, curettage, drainage, and irrigations are to be employed. In ninety-five per cent of the cases of puerperal sepsis nowadays met with this plan of procedure will be all that is necessary to bring about a cure. In the remaining five per cent, roughly speaking, these measures will not be efficacious to arrest the progress of the infection, as will be evidenced by the pulse, temperature, general course of the disease, and sometimes by local signs. An exploratory laparotomy is then indicated, the further course to be guided by the pathological lesions found. In most of these cases total hysterectomy will be required.

When large collections of pus form and are so situated that they can be readily reached either with a vaginal incision or with one above either of Poupart's ligaments, no time should be lost in resorting to surgical relief. When, however, they are not so favorably situated, judicious delay is advisable, with the hope that ultimately the pus may be evacuated without the risk of soiling the general peritoneum. Such a course not only averts the risk to which the patient would be exposed by a more radical procedure, but affords her an opportunity of being restored to health with the conservation of her sexual organs.

A Criticism upon a New Method for Preparing the Skin for Vaccination by Denudation with Caustic Potash Solution.

F. S. Fielder (*Medical Record*, Jan. 27, 1900) says that the advantages of caustic potash denudation are that it is less painful and less terrifying, and that it does not draw blood. The disadvantages are that it takes more time, requires more skill, and that it is difficult by this method to denude an area small enough. The vesicles are likely to be too large if the virus is active. It is less certain than scarification, no matter how skilfully done, because of the formation of an eschar which interferes with absorption. Finally, the writer believes that the disadvantages named, together with the fact that a rather elaborate equipment is required, make the caustic potash method impracticable for use in wholesale vaccinations such as are performed by public vaccinators. As to its value in private practice, if it be deemed important in any particular case, such as that of a very nervous child, to avoid terrifying him or to spare him the slight pain caused by scarification, this method may very well be tried, but unless

the physician is skilled in the use of the method or unless the virus is so active that it will take, no matter how it is applied, he must not be surprised if failure is the result.

Ureteral Calculus.

Howard A. Kelly (*Journal of the American Medical Association*, March 3, 1900) reports a case of ureteral calculus in a woman thirty-eight years old which was diagnosed by means of a wax-tipped bougie. The presence, the exact location, and the size of the stone lodged in the ureter behind the vesical orifice were demonstrated by vaginal palpation. The writer says that the following interesting points were brought out in this case: The use of cocaine injected directly through the vaginal walls into the ureter and the surrounding tissues opens up an interesting field for the use of this drug in the surgery of the lower ureteral tract. t would easily be possible using cocaine in this way to cut into the ureter through the vagina, remove a stone, and sew up the wound without resorting to a general anesthetic. The interior of the ureter may be readily anesthetized by injecting eucaine into it by means of a long slender nozzle attached to a small syringe. The wax-tipped bougie demonstrated the presence of the calculus in the ureter for the first time. By coating the catheter with wax at intervals from the tip down, it would be possible to determine more precisely the exact location of the calculus and so avoid introducing a catheter several times to locate the stone.

Wounding of the Facial Nerve.

At a recent meeting of the Gesellschaft der Aerzte, Biehl (*Medical Press and Circular*) showed a young man, aged twenty-two, who in July, 1898, received a stab from a knife on the left ear, wounding the facial nerve and producing paralysis of motion in the movements of the face on the same side. In addition to this there was jerking of the left angle of the mouth, with loss of sensibility and vasomotor disturbance, which confirm some of the experiments conducted in animals. In chewing the left side of the face became bathed in perspiration, extending to the nose and lower jaw, while the right side was perfectly dry. In taking fluid food, or when amyl nitrite and pilocarpine were injected, this phenomenon was absent.

Resection of Three and a Half Yards of the Intestine.

M. Montprofit (*Medical Press*, Feb. 14, 1900) operated on a man who had an inguinal hernia the size of an adult head, which could neither be maintained nor reduced. He found the intestine to be so entangled and mixed up that he removed the whole mass. The two

ends of the intestine were then brought together and sutured. The man made an excellent recovery, and but for some diarrhea each time he eats meat would suffer no inconvenience. The mass weighed 3½ pounds and comprised a part of the ileum, the cæcum, the ascending colon, and half of the transverse colon. It was nearly ten feet long.

MEDICINE.

The Prophylaxis of Malaria.

This problem, says A. Celli (*British Medical Journal*, Feb. 10, 1900), practically consists in destroying the larvæ in the water and the mosquitoes in the air. For the destruction of the larvæ, and consequently for the disinfection of the waters which contain them, vegetable powders (unexpanded flowers of Dalmatian chrysanthemums), certain aniline dyes (larvicide of the house of Weiler-Ter-Mer of Uerdigen), and petroleum are the best, taking into consideration the dose, practicability, and price. By cultivating chrysanthemums on a large scale it is very probable that the malarious place itself will produce that which will rid it of the mosquitoes which infest it. Larvicide acts even in the small dose of 0.00031 per cent, and its cost per cubic centimeter of water may be as low as 1.0056 to 0.0012 lira; it is very diffusible, remains active for a long time in water, and is not poisonous to plants nor to animals. Petroleum, which acts mechanically by asphyxiating the larvæ and nymphæ, must form a stratum which covers the whole surface in the proportion at least of 0.20 to 0.10 cubic centimeter per 100 cubic centimeters; it has the defect of evaporating, and therefore its action is of short duration.

The selection of one or other of these means will depend upon circumstances. It should be remembered, however, that the most suitable time for destroying the larvæ is the winter or the beginning of the spring, when they are in least number in the waters, and when the new generations have not yet made their appearance. The knowledge of the place and the season in which they nest will very much aid this destruction, which on a large scale will never be very easy, and it will be difficult as long as the health of man who suffers from malaria is not protected. Still, after efforts that have been made by nations and private individuals to protect vines from the oidium, peronospera, and phylloxera, surely something should be done to save the life of man from malaria. In any case, it is necessary to insist on the destruction, especially in the winter, of the aerial mosquitoes in houses wherever they hibernate, inasmuch as the death of each mosquito means the non-appearance of from two hundred million to twenty milliard descendants the subsequent season, the former number being

produced by four generations in a season, and the latter, as frequently happens, by five (Ficalbi). The destruction of the aerial mosquitoes inside houses in the malarious months is also a valuable prophylactic measure. For this purpose the fumes given off by an ignited powder composed of the unexpanded flowers of chrysanthemums, valerian root, and larvicide are the best of all the odors and all the fumes tested and retested in the laboratory on a large scale. It is sold by the Italian "Chemico" Pharmaceutical Society of Rome under the name of "zanzolin." Consequently the problem of the destruction of mosquitoes as a means of antimalarial disinfection can and ought to be brought into practice.

THE PHYSIOLOGICAL EFFECTS OF ALCOHOL IN HEALTH AND DISEASE.

At a recent meeting of the New York Medico-Surgical Society, H. L. Taylor (*Medical Record*, Jan. 27, 1900) read a paper with this title. He said that there are three principal views held regarding the effects of alcoholic beverages, viz.: (1) The ignorant, (2) the biased, and (3) the scientific. Belonging to the first class are those persons who seem to place no limit to the strengthening and healing virtues of alcohol, and who drink it when tired, weak, or sick, or indeed whenever there is even the slightest excuse for so doing. (The reader then passed around some of the text-books used for the purpose of compulsory instruction of children in the public schools regarding the alleged effects of alcohol.) Many of the statements quoted are astounding in their misrepresentations. Such teaching indicates the views of the biased. According to the scientific view alcohol is powerless to prevent but temporarily allays fatigue. In old age, and in certain conditions of debility, moderate indulgence in alcohol is beneficial. Alcohol should not be used by healthy people habitually as an appetizer. Mixed drinks and alcoholized tonics are much more harmful than pure spirits. Alcohol is often useful, sometimes indispensable, in pneumonia, typhoid fever, diphtheria, sepsis, and other serious acute diseases. It is a dangerous remedy in many nervous disorders, or if continued regularly for long periods. In Taylor's opinion alcohol is not so frequently prescribed as formerly. The practice of English hospitals of reporting the annual consumption of alcohol per capita might be profitably imitated in this country. Lord Roberts stated recently that the admissions to the hospital in the British army were 208½ per thousand for abstainers and 301½ for non-abstainers.

In conclusion, Dr. Taylor said that physicians should prescribe alcohol only when physiologically indicated; they should insist that the physiology taught in the public schools should not be a distorted

physiology; they should discountenance the giving of alcoholic beverages to children except on a physician's prescription; and they should demand that the amount of alcohol contained in bitters and tonics be printed on the bottle.

Athetosis and Kindred Affections.

Frank Fisher (*Philadelphia Medical Journal*, Jan. 27, 1900) says that in those cases of athetosis in which a lesion has been found, if it has been located in the posterior third of the posterior limb of the internal capsule or in the adjacent portion of the thalamus opticus, these are the sites of sensory organs. These lesions could not produce the symptoms of athetosis by direct irritation of the neighboring pyramidal tract, for if they would the abnormal movements would be more common in the lower or internal extremities, whereas the reverse of this is the case. Chorea is frequently occasioned by fright and similar violent emotions. Emotions are occasioned by impressions upon the receptive centers—that is, upon those of sensation and psychic function. Chronic chorea has frequently disappeared after the removal of some peripheral source of irritation. In posthemiplegic chorea and in posthemiplegic athetosis there is a focal disease of the optic thalamus or of the posterior part of the internal capsule. Cocainization of the so-called motor areas of the cortex prevents the occurrence of localized convulsions upon irritation of these areas. In a large fraction of all cases of epilepsy the initial symptom of an attack is a sensory aura. Numerous cases of epilepsy are acknowledged to be of reflex origin—*e.g.*, cases that have been attributed to old scars, to carious teeth, disease of the internal ear, injuries of the temple bone, eye-strain, etc.

Concretions in the Urinary Tract.

At a recent meeting of the Vienna Gesellschaft der Aerzte, Zuckerkandl (*Medical Press and Circular*, Dec. 13, 1899) showed a few concretions taken from different parts of the urinary tract. The first were three stones removed from the urethra of a child aged 3½ years. The second was a preputial stone taken from a man seventy-three years of age, who ten years previously was stung on the organ by a wasp, which produced a phlegmonous condition of the penis, with subsequent hardening of a small tumor about the size of an apple. The operation revealed two phosphatic stones in the preputial sac.

The third was a stone occurring in a female aged fifty-five. For a long time this stone was caught in the lower end of the right ureter,

where it formed a sac. It ultimately burrowed its way into the bladder, whence it was removed by crushing.

Whatever be the primary origin of these para-urethral stones, Zuckerkandl is firmly convinced that many of these crypts and fistulæ furnish the initial history of a number of the nephritic and cystic stones met with in daily practice, which often reach a gigantic size before removal.

Spasmus Nutans and its Treatment.

Spasmus nutans is a disease, says I. Abt (*Journal of the American Medical Association*, Feb. 3, 1900), which was first described by Romberg and Henoch, and which appears in the literature under a variety of names—head nodding, rotatory and rhythmic spasms. Gyrospasm of the head is a term which Peterson has applied to the rotatory variety of the disease. As to the treatment, the writer says that cases of uncomplicated spasmus nutans tend to make a spontaneous recovery. The condition of the general health should be ascertained, and tonics should be administered if indicated. If the child is rachitic, antirachitic treatment and diet should be instituted. Bromide of soda, either alone or combined with tincture of belladonna, undoubtedly exercises a favorable influence on the course of the disease. Mills suggests the use of one minim of fluid extract of conium. In view of the theory that the condition is allied to canine chorea, and in light of the suggestion of H. C. Wood, that quinine has a controlling power over the choreic movements of the dog, Mills suggests that quinine be given in increasing doses to children suffering from this disease.

Preventive Inoculation Against Bubonic Plague.

In an article upon this subject in the *British Medical Journal* of February 10, 1900, Profs. A. Lustig and G. Galeotti sum up their conclusions as follows:

1. The efficacy of our method of preventive inoculation against the plague by means of the nucleo-proteid extracted by us from the plague bacilli has been proved from the experiments made on animals —rats, rabbits, guinea-pigs, monkeys.

2. The immunizing substance used by us is innocuous in the case of man. No troubles of any kind arise from its use, either local or general.

3. If the cultural liquids used in their entirety possess an immunizing power, they owe this power to the nucleo-proteid which they contain, and which we have isolated.

4. The advantages of using an active substance isolated and pure

in place of liquids (cultures) which contain this substance, mixed, however, with heterogeneous elements of different kinds, are at once evident.

Tuberculosis; Early Diagnosis.

Murat (*Independence Médicale*) says that Daremberg and Chugnet have described a thermometric oscillation which occurs in cases of latent tuberculosis and amounts to a discrepancy of one degree or more between measurements taken in the recumbent and the erect posture.

The exhibition during two to three days of twelve grains of iodide of potassium (75 centigrammes) causes sonorous râles to appear in the suspected areas of lung tissue.

Patients affected with incipient tuberculosis may feel the vibrations which vocal effort (speaking loud, etc.) imparts to the infiltrated lung tissue. It may of course be necessary to attract their attention to this fact, as they may not themselves have noticed it until taught to do so.

THERAPEUTICS.

Aqueous Salt Solutions.

Aqueous salt solutions are, according to a research made by Pfeiffer and Sommer (*Archiv f. Exper. Path. u. Pharmacol.*, xliii, Nos. 1 and 2), subject to the same physical laws in their absorption from the stomach as have been already determined under like conditions in their absorption from the intestines. The peculiarities in the structure of the gastric mucous membrane do, however, effect some minor variations from a simple osmotic process; for example, this membrane is permeable for water only in the direction toward the stomach cavity. The solutions employed in the experiments were of sodium sulphate, sodium chloride, magnesium sulphate, and cane-sugar, and the determinations made by the aid of the freezing-points. Hypertonic solutions—that is, those whose molecular concentration was greater than that of the blood-serum—showed a diminution in concentration; hypotonic solutions increased, and isotonic ones were in general unchanged. Investigation of the phenomena in cases of various forms of gastric disorder gave results which did not appreciably vary from the normal.

In furunculosis of external origin Martin (*Soc. de Thér.*, Paris, October and November, 1899) recommends the daily use of hot douches followed by soft soap (sapo viridis) ablutions and ether and bichloride solution, each treatment to last eight to ten minutes.

In furunculosis of digestive origin he promises considerable advantage from the use of yeast, while he reports negative returns from repeated exhibition of cathartics and intestinal antiseptics—*e.g.*, naphthol.

The Saline Treatment of Dysentery.

W. J. Buchanan (*British Medical Journal*, Feb. 10, 1900) reports a series of 555 consecutive cases of dysentery with only six deaths. He gives a drachm of sodium sulphate three or four times a day. Purgation should be free but gentle, and when bright-yellow stools without a trace of blood or mucus are passed, then the drug should be stopped, but resumed at once if blood or mucus reappears in the stools. The writer says that he has usually found that after five or six stools are passed blood and mucus have disappeared, but in many cases they reappear in a day or so. In such cases sodium sulphate must again be given. In chronic and relapsing cases Dr. Buchanan says he has tried olive oil for some time, but gave it up as of no special value, and now treats these cases chiefly by dieting and patience. When first seen they are given sodium sulphate for one or at most two doses, and then bismuth and soda or other intestinal antiseptics. For every exacerbation—that is, for every return of blood and mucus—a dose of sodium sulphate is given, or if scybala are passed a dose of castor oil and laudanum. Intestinal worms are not infrequent in chronic cases, and when such are seen or expected santonin or male-fern should be given. The writer says he considers salines, except in the limited doses above mentioned, as harmful where there is ulceration of the great intestine. In ordinary cases the acute stage under this treatment is over by the third or fourth day, and if the stools remain free from the dysentery products, a tonic of iron or nux vomica should be given.

Methylene Blue in Malaria.

J. W. P. Smithwick (*Merck's Archives*, February, 1900) says that medicinal methylene blue is usually administered in doses of two grains six times a day. From his own observations and from the reports of others the writer has deduced the following conclusions:

1. Methylene blue is a perfect succedaneum for quinine, and may be given whenever the latter drug is indicated in the treatment of malaria of every form, and under all conditions, with the same confidence that has always attended the administration of quinine.

2. Patients need not be selected on account of idiosyncrasies, as no bad effects ever follow the use of methylene blue, if given intelligently.

3. It is the remedy to use in malaria with hematuric complications, as it acts in a twofold manner.

4. It is the remedy to be given in malaria occurring during the pregnant period, as it has no oxytocic effect and will cause a freer action of the kidneys, which is also beneficial.

Treatment of Furunculosis.

Dr. Gallois (*Medical Press and Circular*, Feb. 7, 1900) has obtained quite extraordinary results from the treatment of boils and wounds in general by the application of salicylate of methyl. The liquid form of the drug has the advantage of being applicable in wet dressings. Employed in the pure state by rubbing, and on extensive wounds by linen steeped in it and covered by oiled silk, salicylate of methyl provokes but the slightest pain. Dr. Gallois considers it an excellent antiseptic, preventing the formation of pus and stimulating the granulation of the wound.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Lesions of the Liver in Young Children.

R. G. Freeman (*Archives of Pediatrics*, February, 1900), in an article upon the lesions of the liver found in children, says that descent of the liver down the right side of the abdomen, so that the right lobe reaches below the crest of the ilium, occurs not very rarely in infants, and particularly in those in whom the liver is enlarged.

Fatty livers occur very frequently in the infants and children which die at the Foundling Hospital, or in about forty-one per cent of all cases.

The condition of nutrition of the child, as expressed by the absence of fat in general and wasting of tissue, apparently has no connection with the fatty condition of the liver, the condition of nutrition in the cases having fatty livers averaging about the same as in the whole number of cases.

Fatty livers occur rarely in the following chronic wasting diseases: marasmus, malnutrition, rachitis, and syphilis; unless such condition be complicated by an acute disease.

With tuberculosis fatty livers occur not more often than with other conditions.

Fatty livers occur most often with the acute infectious diseases and gastrointestinal disorders.

The two cases of cirrhosis of the liver examined by the writer ran a comparatively acute course. The livers on section showed a marked hyperplasia of the so-called new-formed bile-ducts.

Focal necrosis of the liver may be a lesion of measles.

Arsenic in the Normal Organism.

Gautier (*Proc. Acad. de Méd.*, Paris, Dec. 5, 1899; *Progrès Médical*, Dec. 9, p. 454) demonstrated the presence of arsenic under the form of arsenuclein (a combination of arsenic and nuclein) in small but appreciable quantities in the brain, thyroid, and skin of normal individuals. Aside from its biologic importance this fact also has a medicolegal bearing, insomuch as it behooves us not to analyze the various organs in a bunch, but separately, as has long ago been insisted upon by Professor Brouardel.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Recurrence of Deviation After the Asch Operation Authoritatively Denied.

In the issue of this journal of January 10 there appeared an abstract of an article published in the *Medical Mirror*. In the original article the statement was made: "Many claim that the deviation recurs in after years when the Asch operation is performed." Dr. Emil Mayer has been at some pains to learn the source of and authority for this statement. He has written to this department that this statement was made by two men only, and that these two men were Viennese unfamiliar with the technique or results of the Asch operation, and not qualified to give an intelligent opinion thereon. As is well known, one of the chief claims of Asch and Mayer has been that besides its great simplicity, the principal advantage of the operation was non-recurrence of the deviation.—Ed.

Diagnosis of Nasal Accessory Cavity Affections.

As a further aid to the definite diagnosis in doubtful cases of disease of the accessory nasal cavities, Seifert, of Würzburg (*Revue Hebd. de Laryngologie*, etc., No. 50, 1899), uses what he calls negative politzerization. After very thorough cleansing of the nose and naso-

pharyngeal cavity the lower and middle turbinates are thoroughly cocainized to reduce as much as possible the swelling of the mucous membrane and thereby freely open the outlets of the accessory cavities. When the patient has taken a swallow of water in the mouth, a compressed Politzer bag is applied to the nostril of the suspected side and the other nostril compressed with the finger. Then, while the patient swallows the water (the mouth must, of course, be closed), the compressed balloon is allowed to expand. As a consequence of the diminished air-pressure in the nasal cavity, some of the secretion present in an accessory cavity is drawn out, and in the immediately following examination can be seen at the opening of the outlet of the accessory cavity. Several repetitions of this experiment are usually necessary. If in the course of several sittings no abnormal secretion can in this manner be observed, one must reach the conclusion that the accessory cavities are not affected. Seifert was able by this method to make, in a group of cases, an exact differential diagnosis, in both a positive and negative sense.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Pathogenesis of Uterine Rupture.

Alexander Doktor, of Budapest (*Centr. f. Gynäk.*, 1899, p. 1537), reports *in extenso* a case of rupture of the uterus, with penetration of the fetus into the abdominal cavity, occurring in a multipara (third pregnancy) with a narrow pelvis. Conjugata diagonalis 9 centimeters; conjugata vera 7–7.5 centimeters. Laparotomy six and a half hours later. Cured.

Doktor comes to the conclusion that in similar cases the rupture is directly traceable to the pelvic deformity. A first labor may terminate in a physiological manner, yet the passive cervical segment undergoes considerable distention, which leaves it in a weakened and flabby condition. What with successive labors and the gradual increase in fetal diameters during subsequent pregnancies, the cervical segment sustains a still greater distention and increased loss of tone (Bandl), the proportional discrepancy finally becoming so considerable that uterine rupture is bound to follow. Referring to peritoneal lavage, he believes with Fritsch that increased cardiac tone seems capable of overcoming threatening septic complications, and is inclined to ascribe

the beneficial results of intraperitoneal injection of normal saline solution to increased blood-pressure and consequent increase in cardiac efficiency, rather than to the problematic influence of lavage itself.

Operative Treatment of Anteflexion.

W. L. Burrage (*American Gynecological and Obstetrical Journal*, January, 1900) says that as a result of experience in the operative treatment of anteflexion he has laid down the following rules for guidance:

In anteflexion without ovarian or tubal disease, and free from shortened uterosacral ligaments or posterior adhesions, dilatation, curetting, and Dudley's operation or amputation of the cervix, with a preference for the former.

In anteflexion with retroposition and shortened uterosacral ligaments or posterior adhesions, and without ovarian or tubal disease, dilatation, curetting, and division of the uterosacral ligaments or adhesions by colpotomy, and Dudley's operation or amputation of the cervix, with a preference for the former.

Amputation of the cervix is a useful operation in cases such as those referred to above, where the uterus is excessively large, and also where there is extensive erosion of the crown of the cervix. In married women, in both of the foregoing classes, dilatation and curetting without other operation are sufficient, because pregnancy in a majority of instances will straighten the uterus and stretch ligaments and adhesions. Should pregnancy not supervene within a number of months and the symptoms persist, another curetting and Dudley's operation with or without division of the ligaments may be done.

In anteflexion with or without retroposition complicated with ovarian or tubal disease, dilatation, curetting, Dudley's operation, and suspensio-uteri—the uterosacral ligaments being divided through the abdominal wound if they are shortened—and whatever may be necessary to be done to the ovaries and tubes.

Fissured Nipples and Mastitis.

Rubeska (*Archiv für Gynäk.*, vol. 58, No. 1) reviews the statistics of the Prague Maternity School, and reports fissured nipples in 39.4 per cent of all nursing patients. A majority of cases—61.6 per cent—occurred on the third or fourth day. Treatment was applied in the form of three-per-cent boracic acid solution, held in place and kept moist by a sheet of rubber tissue. By making use of rubber nipple

shields most patients were enabled to continue nursing, and 70.8 per cent of the cases were cured within ten days. In cases of incipient mastitis Rubeska recommends thorough disinfection of the nipple, application during two hours of a 0.5-per-cent bichloride solution, aspiration by means of a breast pump, and the ice-bag. Where the septic process is ushered in by a chill, high fever, and painful infiltration, he forthwith injects into the gland two to three hypodermic syringefuls of three-per-cent carbolated solution. He further recommends the use of these injections in less pronounced cases when pain and fever persist after the second day. Of all cases treated after this plan, only two proceeded to suppuration.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

The Corelation of Sexual Function with Insanity and Crime.

In an essay on this subject (*Medical Press*, Jan. 31, 1900) A. Macnaughton-Jones says that from the evidence that has been presented to him he comes to the following conclusions:

1. That the corelation of insanity and disordered sexual functions arising out of affections of the generative organs is a factor to be taken into serious consideration in the treatment of women mentally afflicted.

2. That where there is ground for the suspicion that some physical condition of the uterus or adnexa exists which may produce or aggravate the mental affection, a careful examination, under an anesthetic if necessary, should be made.

3. That in the investigation of criminal acts committed by women, either during the menopause or while the menstrual function is either active or suppressed, due weight should be given to the influence exerted by its irregularity or abeyance on the mind of the woman. In doing this her previous history and temperament have to be considered.

4. That the special dangers of the climacteric period and the symptoms indicative of threatening climacteric mania must be recollected. The principal of these are moroseness and depression of spirits, attacks of hysteria, occasional hallucinations of sight and hearing (especially of smell), suspicions with regard to relations, unjust dislikes, unfounded apprehensions of some great crime com-

mitted or injury inflicted on them, and suicidal tendencies. Here again examination of the pelvic viscera is justifiable.

5. That in operations on the female generative organs there is a greater predisposition to mental disturbance than after other operative procedures, but the postoperative insanity is generally of a temporary nature.

6. That women who have been previously insane are predisposed to a relapse by the development of disease in their sexual organs, and especially to such temporary recurrence of insanity after operation on these organs.

7. In order to anticipate suicidal impulse, and the commission of crime, the disordered mental symptoms exhibited at the menstrual epochs and at the climacteric should be carefully noted, and if the discharge or the cessation of the sexual function be attended by evidence of disease in the sexual organs, an examination of these should be made, when if gross lesions be detected operation should be resorted to.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Some Ocular Disturbances in Typhoid Fever.

Dr. Edmond Koenig (*Le Progrès Médical*, Feb. 3, 1900) remarks that optic neuritis and other eye affections may accompany typhoid fever. Optic neuritis is one of the complications which may lead to atrophy and blindness. This ocular accident, occurring at times in the earlier period of convalescence, should make a reserve prognosis necessary from the double standpoint of general and local condition. Optic neuritis of microbic origin is possible without the intervention of other physiological or pathological mechanism.

Dionin in Ophthalmological Practice.

Wolffberg, of Breslau (*Woch. für Ther. u. Hyg. des Augen*, No. 4, 1899), recommends the use of dionin in pannus trachomatosus, ulcerations of the cornea, and as a dressing after operations for cataract. The beneficial influence of the drug is traceable to a flooding of the conjunctival tract with lymph, which increases vital activity of the tissues. Local applications are made in powder form or in the shape of 25 per-cent dionin-cacao butter disks.

THE MEDICAL AGE

VOL. XVIII. DETROIT, MARCH 25, 1900. No. 6.

ORIGINAL CONTRIBUTIONS.

THE SIGNIFICANCE OF POSTCLIMACTERIC HEMORRHAGES.

BY F. A. L. LOCKHART, M D , C.M. EDIN.,

Gynecologist to the Montreal General Hospital and Protestant Hospital for the Insane; Verduni Demonstrator in Gynecology in McGill University, etc.

From a sexual standpoint woman's life may be divided into four periods, viz.: (1) Childhood—*i.e.*, before the onset of puberty; (2) puberty, or the period during which the sexual characteristics are manifesting themselves; (3) nubility—*i.e.*, when the female is thoroughly mature and ready to fulfil her function of reproduction; (4) climacteric or menopause—*i.e.*, the period at which sexual activity ceases and the individual has completed her period of fertility.

Just as the beginning of sexual activity (puberty) is marked by periodic pelvic congestion, as evinced by the appearance of a hemorrhagic discharge from the genitals which is called the process of menstruation, so its termination (the climacteric) is marked by a permanent cessation of this flow. This is the rule, but, just as in every other case, this rule has its exceptions, as cases have been recorded where females have given birth to children both before the first appearance of menstruation and after the establishment of the menopause.

The ages at which each of the above mentioned epochs begins vary in different altitudes and, to a less extent, in different races. In our own temperate zone the menstrual function usually begins between twelve and fourteen years of age, while the menopause occurs between the ages of forty-two and forty-five. As regards nubility, very few of our girls are really thoroughly fitted to undergo the responsibilities and trials of matrimony until they reach the age of twenty-one or twenty-three years, by which time both mind and body

should have become well developed, although each individual is a law unto herself, and while one might be nubile at eighteen, another may not reach that stage until thirty.

The periods of puberty, maturity, and the climacteric have gynecological diseases to which the patient is especially liable. During the establishment of the menstrual function there is the liability to sarcoma and to an acceleration of any constitutional malady which the patient may possess. While the sexual system is most active the patient is particularly prone to fibrous growths of the uterus, and in illustration of this allow me to briefly relate a case which occurred in my own practice. Two years ago a young lady, twenty-eight years of age, came to me complaining of severe dysmenorrhea. A very careful and satisfactory pelvic examination under an anesthetic revealed only an ordinary sized uterus, which was the seat of anteflexion and endometritis, the appendages being normal. The patient married about twelve months ago, and came to me six months later, complaining of intense pain in the left iliac region, dysmenorrhea, and excessive flow at her periods, which occurred quite regularly every twenty-eight days. Local examination revealed a cervix which was soft, but not so much a typical softening of pregnancy, and the uterus lying much forward and enlarged quite symmetrically to the size of a four months' pregnancy. Owing to the rapidity of growth and to her mother having menstruated each of the nine months when carrying children, the possibility of pregnancy occurred to me, and this opinion was shared by another physician who was asked to see the case with me. As further observation showed the growth to be a fibroid, I removed it a few weeks ago. I have no doubt that there was a very small fibroid nodule inside of the uterus at the time of the first examination, and that the repeated attacks of pelvic congestion due to the exercise of marital relations caused the extremely rapid growth of the neoplasm.

We are now in a position to consider the question of "postclimacteric hemorrhage," and, as a text, permit me to make the following quotation from An American Text-book of Gynecology: "If uterine bleeding occurs after the establishment of this condition (the climacteric) one of two diseases is most likely to be found—either fibroma or malignancy, with the chances largely in favor of malignancy, especially if the woman be a multipara."

While we cannot take up all of the diseases which may possibly occur at the menopause, I think that the above quotation from one of our standard text-books will warrant some consideration of genital carcinoma, which in the vast majority of instances makes its first appearance at or near the climacteric. It is the fact of the tendency

of this disease to occur at this time, and that one of its most constant symptoms is hemorrhage, which gives to postclimacteric hemorrhage an importance which I fear is not sufficiently recognized by most writers or insisted upon sufficiently by teachers. How often a patient comes to us saying that the change of life came on four or five years ago, that she had observed discharges of blood from the genitals off and on for the last six months or a year, but had thought nothing of it until now, when the amount of blood lost had increased to such an extent that she became alarmed, and upon making a local examination we find that the cervix has been the original seat of carcinoma, which has now spread outward into the broad ligament and down into the vagina to such an extent that nothing can be done in the way of curing the condition.

It is the duty of every conscientious physician to insist upon making a local examination of every woman who has passed the climacteric and comes to him complaining of a colored vaginal discharge, whether she has pain or not. If the patient refuses, it is better to withdraw entirely from the case, as after she has learned, later on, that she has a cancer which has progressed too far for any hopes of cure, she will probably blame you for not having forced her to submit to be examined. If the case be one of carcinoma the uterus will be more or less enlarged and hard without any other alteration in the cervix than an excessive hardening, if the disease be confined to the fundus. There will also probably be a malodorous discharge from the uterus. If the cervix be the seat of the disease and this is in an early stage, it will be hard and probably somewhat nodular with proliferation of the epithelium, which bleeds upon contact with any hard substance, and which has here and there grayish patches scattered over its surface. In a later stage we have, of course, the well known crater-like cavity, the walls of which crumble away under the finger. The patient will also present the usual cancerous cachexia, especially if the disease be at all advanced. This appearance, however, must not mislead one, as there are cases where the cervical canal is stenosed in old people and the uterine contents become putrid, this giving rise to a cachectic appearance; but here there is little if any hemorrhage, although a fetid discharge may be present.

Another condition occurring at this time of life, and which is characterized by bleeding, is simple senile endometritis of the hemorrhagic variety. Here the hemorrhage is in the form of a constant oozing instead of gushes of blood, and the fluid is inclined to be dark and to be mixed with mucus. This may occur in elderly women who are very much run down in health, even if the uterus is in good position, but it is more apt to occur where the uterus is prolapsed or

retroverted. This general oozing is almost characteristic of senile hemorrhagic endometritis, as it is not due to the sudden breaking down of comparatively large blood-vessels as in cancer or atheroma, but now and then the blood does come away in gushes, in which case it is apt to be bright colored. The following case well illustrates the condition which we are now considering: Mrs. B——, aged sixty-two years, who was under my care for functional cardiac trouble for some years, came to me complaining of a mucoid discharge which was streaked with blood. Her periods had ceased about twelve years previous. She had had one child about thirty-five years ago. No history of miscarriages. She led a very sedentary life, walking very little, and not even driving very much. She gave a history of having overexerted herself to some extent. There was no pelvic pain or loss of flesh. Local examination revealed a cervix which was not lacerated, but the margins of the os were soft and velvety. The fundus was slightly enlarged, non-sensitive, freely movable, and somewhat prolapsed. Senile hemorrhagic endometritis was diagnosed, and she was put to bed. A tonic was ordered for her, and she was advised to take hot douches, containing one teaspoonful of fluid extract pinus canadensis alba to each quart of water, morning and night, and was well in a few days. It may be asked how I can be certain that this old lady did not have cancer. I am sure of it for two reasons. First of all, the patient's appearance and history were opposed to cancer, and secondly, the discharge of blood occurred over two years ago, and the patient has been in excellent health ever since.

It is stated that when there are extensive atheromatous changes taking place in other parts of the body, we have them occurring in the submucous vessels of the endometrium. When this is the case the vessels break down and cause more or less hemorrhage which may be in the form of gushes or oozing of bright-red blood, not the dark-colored discharge seen in senile endometritis. This condition, however, I have never been able to differentiate clinically from one of simple senile endometritis, and I think that those who have described the condition have made their diagnosis *per visu* after the uterus has been removed from the body, or else by inferring an atheromatous condition of the uterine arterioles from the presence and extent of the condition elsewhere; but this reasoning is liable to lead one into error.

The following case well exemplifies the fact that a woman may have a great deal of atheromatous degeneration of some vessels while those of the uterus are entirely unaffected: Mrs. F——, age uncertain but probably over seventy, was admitted to the gynecological ward of the Montreal General Hospital with complete procidentia of the

uterus. As local treatment would not keep the uterus in position, the question of vaginal hysterectomy was considered, I being decidedly chary about operating on account of the extensive atheromatous degeneration of those arteries which could be palpated, as I thought that we would have great trouble to stop any hemorrhage during operation. However, I removed the uterus *per vaginam* and had no difficulty at all with the vessels, although the thickening of the mucous membrane over the cervix rendered the operation very difficult by obscuring the landmarks. On examining this uterus for atheroma, none could be found, although carefully searched for.

In addition to the above conditions, we may have hemorrhage from a submucous fibroid, but it is rare to have this disease not manifest itself until after the climacteric. Of course this condition is comparatively easily diagnosed by the size and shape of the uterus, its mobility, and the appearance of the patient, who will probably be quite robust. If, however, it is merely a polypus which is causing the trouble, the diagnosis is not so easy, as the uterus may not be enlarged. Even the curette or sound may not detect it, so that exploration of the uterine cavity with the finger is of great service in diagnosing any of the above conditions. Of all these latter, the case which will give most trouble is one in which we are uncertain whether the patient has endometritis or carcinoma of the fundus. In both the uterus will probably be enlarged (more so, of course, if the case be malignant), in both there may be cachectic appearance, and there may be pain with both or with neither. However, in carcinoma there will usually be a malodorous discharge, fitful hemorrhage, more or less rapid loss of flesh, and no improvement on treatment; while in endometritis the discharge will probably have no odor, and will be mucoid and streaked with blood. Again, the loss of blood will be by a steady oozing usually, there will not be so great a probability of the patient being cachectic, nor will she be likely to lose flesh to any extent; and lastly, the more children the woman has had the greater will be the chances in favor of malignancy. If we cannot decide otherwise we should undoubtedly curette the cavity and have the tissue removed examined by a competent pathologist. If he diagnoses cancer, remove the uterus at once, while if he pronounces the trouble to be benign, watch the case very carefully for several months. If the hemorrhage should return after a second, or at most a third, careful curettage, I would strongly advise removal of the uterus, as the disease is almost sure to be of a malignant nature.

While a strong opponent to the indiscriminate removal of uteri, say for tubal disease, I think that if one is a skilled operator and has a reasonable doubt as to whether the uterus is the seat of cancer or of

endometritis, and the doubt can be cleared up in no other way, he should remove that uterus at once and allow no chance of a post-mortem diagnosis of cancer of the fundus nine months or a year later. Statistics are proverbially unreliable, therefore I will give none; but I think all will agree with me that vaginal hysterectomy, where there is a small, freely movable uterus, and a fairly strong patient, is not a very dangerous procedure in the hands of an experienced operator, and that it is preferable to expose the patient to the comparatively slight risk of an operation than to the horrors of death from pelvic carcinoma.

CATARRHAL DEAFNESS.

BY A. L. ADAMS, M.D., JACKSONVILLE, ILL.,
Oculist and Aurist to Illinois State Institutions for the Blind and Deaf and Dumb.

It is my purpose to call attention particularly to the causes and pathology of catarrhal deafness and to the means by which it can be prevented or arrested in its progress.

We are continually seeing cases of deafness or impairment of hearing as a result of catarrhal conditions of the nose, throat, or ears. Perhaps none of our functions is more often impaired than that of hearing, and this in spite of the fact that we have in health an excess of that sense over absolute necessity. It is not rare for one to accidentally find an ear almost totally deaf, when by examination we see it has undoubtedly been impaired for a long time past. Both ears can be involved to a considerable extent before any serious inconvenience results. Hartmann estimates that one in every four of the German population is defective in hearing in one or both ears. The frequent impairment of so necessary a function indicates a close relationship with other mechanisms. The most important portions of the organ of hearing are protected within the bony walls of the temporal bone, yet are connected with the upper air tract and food passage by partially membranous tubes lined with a mucous membrane. This mucous membrane is a continuation or extension of that lining the nasopharyngeal cavity and the inner portion of the drum membrane.

When we consider the large number of diseases and accidents caused by the exposed location and peculiar function of the upper air tract and food passage, we can more readily understand the reasons why inflammatory processes in the ear, acute or chronic, are so common. The Eustachian tube is about one and one-half inches in length, extending from the middle of the internal wall of the tympanic membrane downward, forward, and inward. The pharyngeal end is back of the nose and situated in the upper lateral wall of the pharynx. The

lumen of this tube is about one-twentieth of an inch in diameter midway in its course, and as it extends downward is about one-fifth of an inch in diameter. The lower orifice, its longest diameter, is vertical, trumpet-shaped. While at rest the Eustachian orifice is closed, and is only opened by the various muscular contraction movements of the fauces.

The mucous membrane lining the tubes is supplied with mucous glands and lymphatic tissue, the latter being in the diffuse form and also in the form of true lymphatic nodules. The function of the Eustachian tube is to maintain an equal atmospheric pressure on both sides of the tympanic membrane. When this function is not performed, well-recognized results are certain to follow. The air contained in the tympanic cavity is absorbed by the tissues. The atmospheric pressure forces the drum membrane inward, straining the attachments of the ossicles and changing the pressure on the fluid in the labyrinth. It causes a passive congestion of the middle ear. The continuation of the cause and lack of resistance of the tissues leads on to certain pathological results. In health movements of the soft palate during deglutition and respiration and articulation draw open the flaccid pharyngeal opening of the tube, thus insuring frequent and regular ventilation of the middle ear.

Those conditions or diseases causing a change in function of the nasopharyngeal mucous membrane are undoubtedly the cause of a large majority of the diseases of the ear. These inflammations of the mucous membrane of the nasopharynx are caused by exposure to cold when the body is overheated, by inhalation of hot dry air, dust, and irritating vapors. A scrofulous or a rheumatic diathesis predisposes to nasopharyngitis. The exanthemata are prolific in causing diseases of this membrane. An important predisposing factor is some obstructive lesion of the nose or nasopharynx. The chief and earliest cause is the presence of adenoid vegetations in the pharyngeal vault. The presence of soft, loose-meshed lymphatic tissue affords lodgment to pathogenic germs inhaled. These readily light up inflammations that extend out into the Eustachian tubes. The presence of a mass of lymphoid material in the vault prevents the normal action of the soft palate and may thus interfere with ventilation of the middle ear. Swollen and inflamed adenoids by direct pressure may prevent opening of the Eustachian tube. With the exacerbations of the inflammation of the adenoid structures come repeated attacks of catarrhal inflammation of the middle ear, causing the frequently recurring earaches of children. The continuation of this condition for a few years sows the seed for a catarrhal deafness long after the original cause, the adenoids, has atrophied and disap-

peared. Hypertrophied faucial tonsils to a less extent interfere with the free action of the soft palate, and hence are a factor in preventing normal ventilation of the middle ear. It is generally admitted by otologists that most of the cases of catarrhal deafness are caused by aural catarrhs in childhood, resulting from diseased lymphoid structures of the nasopharynx. In older children and adults obstructive lesions in the nose, as deflections or spurs of the nasal septum, polypi, and hypertrophy of the nasal mucous membrane, are the causes most often of nasal catarrh, and are therefore often the starting-point of inflammations that eventually result in impaired hearing. Clinically, deafness from catarrh may be divided into:

1. Tubal congestion or Eustachian catarrh.
2. Acute catarrhal inflammation of the middle ear.
3. Chronic catarrhal inflammation of the middle ear.

Tubal Congestion or Eustachian Catarrh.—This occurs in the course of an ordinary cold in the head. The patient complains of a feeling of heaviness in the ears and fulness of the head, more than of real pain. He often suspects a foreign body or wax in the external canals, and is inclined to put his fingers in the external meati. There is also apt to be a tickling or scratching feeling about the larynx or tonsils. The hearing is dull, and often there is a distressing ringing in the ears. Vertigo may be present. The sensation of talking with one's head in a barrel is suggested by the sound of his own voice. By inspection the drum is found normal in color and luster, but is drawn inward and appears stretched and drawn into folds. It is difficult or impossible to inflate the ear by Valsalva's or Politzer's method. The prognosis is favorable as far as relief from the immediate symptoms is concerned, the danger being the recurrence from lack of attention to other pathological conditions present in the nose or throat.

An attack of Eustachian catarrh usually lasts from five to fourteen days with treatment, though the ringing in the ears may last a longer period. The repetition of acute attacks causes inflammatory conditions to remain within the tympanum. Thickening of the drum and adhesions of that membrane are the result. Treatment: first, for the immediate symptoms, and secondly, to prevent a recurrence. The impaired hearing and ringing in the ears are quickly relieved by inflating air into the middle ear. If not possible by use of the air-bag, then it should be done by means of the catheter. This should be done gently, as violent filling of the middle ear may lead to intense dizziness. If mucus obstructs the mouth of the tube, it must be washed or wiped away by a cotton carrier. To relieve the congestion of the mouth of the tube an application of silver nitrate solution, from ten to thirty grains, should be made by a cotton carrier bent properly to reach the desired spot.

Under prophylactic measures we may consider the causes of colds in the head, and which have been mentioned as enlarged faucial and pharyngeal tonsils and obstructions to nasal breathing. Attention to the hygienic surroundings, woolen underwear, cold sponge baths, and regulation of the habits of life are of great importance.

Acute Catarrhal Otitis Media.—In this condition we find, in addition to the preceding symptoms of catarrh, a change in the circulation of the drum and an actual inflammation present. Just why, in one patient, we should have a congestion of the middle ear or an exudation of serum, and in another an acute inflammatory process resulting in the formation of pus, is hard to explain. A difference of individual resistance to pathogenic germs or a difference in the degree of virulence of the infection can be considered the reason. In a person in perfect health, or one with certain powers of resistance, the venous stasis results in an exudation of serum; in one less robust, the process of infection goes on to the formation of pus. In the catarrhal form of otitis the tympanic cavity becomes filled with serum that exudes from the dilated vessels. This condition of pressure on the sensitive nerves within the tympanum causes pain. A characteristic symptom is the sensation of bubbling or snapping when the nose is blown forcibly. By inspection the appearances vary with the conditions present and the stage of the disease. The drum may be pink, or red, or a dull white. At any time in from twelve to forty-eight hours the drum may rupture spontaneously, as shown by a discharge of serum from the external ear. In other cases the drum does not rupture, but the inflammatory process recedes, leaving the serum and mucus within the tympanic cavity. The discharge of serum may continue for a few hours or days and spontaneously cease; or by contact with the air or a dirty external meatus becomes infected, and the serous discharge then becomes changed to one of pus. In very young children the severity of the constitutional symptoms in this disease often leads one to suspect an involvement of the brain or meninges. The drum, being thinner in a child, yields more quickly than in an adult, and the temperature may be remittent or intermittent for several days thereafter. After the discharge has appeared the canal is filled with serum or mucus, and the drum is seen to be coated with a white or dull gray color. This is easily wiped off, showing the drum membrane to be red and swollen.

Treatment: First relieve the pain, put the patient to bed, and give a saline cathartic. In adults a hypodermic of morphine. In children camphorated tincture of opium may be given internally. It is of the utmost importance, if we expect to put a stop to the inflammatory process, that the patient at this time should have five or six hours of

rest. To absorb the process local bloodletting is necessary. This may be done in front of the tragus by means of an artificial leech, a lancet, or the use of live leeches; then dry heat should be applied, and is always found to give great relief. Moist applications soften the epithelium and hasten the process which we are trying to abort. All oily solutions should be avoided, as many of them tend to become rancid and all tend to obscure the view of the drum. We can use in the ear, warmed carbolic acid one part, in glycerin twenty parts, or aqueous solutions of morphine, atropine, or cocaine. If after twelve hours the pain continues, then the drum should be incised, not waiting to see if it will otherwise rupture spontaneously. This incision should begin just back of the short process of the malleus and extend downward in a curved direction parallel with the border of the drum for a distance at least equal to one-third the diameter of the drum. Following the incision, irrigation with warm water that has been boiled should be applied five or six times a day. The amount of water used becomes smaller in amount.

If the drum ruptures spontaneously the opening may be small and drainage imperfect, thus causing pain to soon return. Under these circumstances the opening should be enlarged and the cavity of the middle ear cleansed by using the air-bag to drive out the mucus, and then treat the case the same as one where an incision has been made in the drum. If the mucous lining of the middle ear is much swollen or thickened, silver nitrate in a solution of two grains to the ounce, or zinc sulphate four grains to the ounce, may be applied, increasing the strength if necessary, and if well tolerated. If adenoids are present in a considerable amount in the pharynx, relapses are apt to occur as the discharge has almost ceased. These may be removed as soon as the acute symptoms are passed, and in fact must be removed to insure prompt recovery and to prevent recurrence of the inflammation of the ear.

Chronic Catarrhal Otitis Media.—Briefly, this may be said to be usually the natural result of repeated attacks of acute catarrhal inflammation of the middle ear. It is clinically divided into two classes, the hypertrophic and sclerotic, resembling somewhat the division of rhinitis into the hypertrophic and atrophic form. It is generally conceded that the latter is secondary to the former condition. Hereditary influence plays no small part in its production. This can best be explained by the tendency to lymphatic deposits in certain families.

To sum up, I wish especially to call attention to the importance of recognition and treatment in early life of those conditions of the pharynx, tonsils, and nose that cause obstructions to breathing or interfere in any way with the free action of the soft palate and venti-

lation of the middle ear. Secondly, that even though the adenoids and tonsils do tend to diminish in size or atrophy in later years, the damage they do extends through life in the form of catarrhal deafness.

BIBLIOGRAPHY.

R. H. M. Dawbarn: *Philadelphia Medical Journal*, July 8, 1899.
F. W. Hinkel: *Philadelphia Medical Journal*, July 15, 1899.
E. B. Dench: Diseases of the Ear, 1895.
J. Gruber: Diseases of the Ear, 1893.
Lennox Browne: Diseases of the Nose and Throat, 1899.
S. S. Bishop: Diseases of the Ear, Nose, and Throat, 1899.
F. H. Bosworth: Diseases of the Nose and Throat, 1892.
A. H. Buck: Diseases of the Ear, 1889.

THE USE OF THE NAUHEIM BATH IN CARDIAC DISEASE.*

BY F. R. HENRY, M.D., PHILADELPHIA, PA.

Here is a girl who has been suffering from anemia, in whose blood we found a large number of eosinophiles. At present her blood-count is normal, but there is still a rather high proportion of eosinophiles. The examination made on November 13 showed the red blood cells about 4,000,000, the hemoglobin fifty per cent. In the last examination the hemoglobin was found to be seventy per cent, which would be regarded as normal. These instruments of foreign make are too highly colored for us. The blood cells are above normal, being over 5,000,000.

Now what has brought about the wonderful improvement of this girl? I can still hear a murmur, but I doubt if any one not familiar with the case would recognize this as the same heart. The heart is a good deal smaller, the murmur is not so marked. The last measure employed in the treatment of the girl is one we rather hesitated to use in the beginning—that is, she had one of the baths when her heart showed great failure of compensation, and it disagreed with her. But lately she has taken them, and has grown wonderfully better. They are the Nauheim baths, an imitation of the bath obtained at that spring. Dr. Schott at Nauheim originated it, and he has gained a great reputation all over the world for the success with which he has treated heart cases at this spring. Travelers go from a distance to enjoy its advantages, and there is no humbug about it at all. The original water at Nauheim contains an enormous quantity of free carbonic acid gas, a large percentage of sodium chloride (about two per cent), two parts in the thousand of chloride of calcium, and I think about the same amount of carbonate of iron. It has been found that

* Reported for THE MEDICAL AGE.

similar results can be obtained from using a bath compounded artificially from these materials and used in your own house. This is a sample of the box containing the materials, labeled the "Triton Bath." There was formerly one objection to this, and that is it was very expensive, being fifty cents a bath. Even to those who are pretty well off a bath costing fifty cents seems much of a luxury. But I am told that there has been a reduction in the price.

This box does not contain the sodium chloride, and in prescribing the bath you had better tell your patient to put the salt in the evening before, so it may be thoroughly dissolved. Be very careful not to put one of these cakes on the bottom of the bath without protecting the tub from the corrosive action of the hydrochloric acid.

The temperature of the bath is a very important thing. It is practically a cool bath, and the temperature is roughly to be from 80° to 94° or 95°, always below the temperature of the body. The average should be about 90°. If you stay in ordinary water of this temperature for ten minutes you will feel chilly, but after a bath of this sort there is no such feeling. The carbonic acid produces a glow, a tingling sensation and feeling of invigoration. Why is it doing good? In those people with cardiac disease the veins are engorged and the arteries comparatively empty. Cool water contracts the vessels of the skin and the blood is forced to seek deeper channels, going especially to the muscles. These vessels dilating, the heart is eased, and when the person comes out the surface vessels also dilate and the viscera are greatly relieved.

In the successive baths there is always a gain in the number of pulse beats, and they gain in volume. The apex will be seen to move toward the center. The appetite improves.

There is another point about this mode of treatment. Dr. Schott encourages his patients to drink water, strange as it may seem. People who have edema we usually put on dry diet, and this seems reasonable; but according to Schott the blood in cardiac disease, from stagnating, has become charged with different matters, especially uric acid, and the water helps this condition. Then he recommends a proteid diet. Many of these cases are of a gouty diathesis, and Schott is one who believes in a proteid diet for such. For my part I think that each of these cases should be studied separately; many cardiac cases have thriven on a diet from which proteid has been practically excluded.

Some of the first men of England have taken up this matter of the baths. Sir William Broadbent and a son of his and Dr. Thorne have written valuable articles on this manner of treatment; and Schott himself has recommended the artificial baths for those who cannot go to the springs.

Another feature of the treatment is the gymnastic exercises given with it—gentle exercises, and not complicated. I do not think the elaborate movements so often laid down for gymnastic exercise need necessarily be observed. These movements are exceedingly gentle, and are resisted by the physician or whoever is directing them. That is an important part of the treatment according to Schott and some others. Yet he finds in some cases he cannot make use of the resisted movements and must rely on the baths.

It is a matter on which all practicing physicians should be informed. According to Thorne it casts all treatment by drugs into the shade. I don't agree with that; I don't think anything can take the place of digitalis. In my opinion the baths are rather an adjuvant than a substitute.

In speaking of the symptoms of heart disease, to give you an idea of how pitiable may be the condition of dropsy, I have under my care a young girl whose skin, from the accumulation of fluid, has given way on the lower part of the thigh. There daily pours out from this opening, I suppose, several quarts of fluid. You might ask why I allowed a patient to get into that condition; but she was practically in that condition when I took charge of her.

There is one symptom of heart disease you hear a great deal about. The term I don't approve of, though you hear it a great deal—"cardiac asthma," a pretty term, but untrue. It simply means difficult breathing in a patient with heart disease. There is no asthma about it. Asthma is due to a spasm of the minute bronchioles, and although there is dyspnea the breathing is slow. In "cardiac asthma" there is nothing of the sort, and we have no right to speak of "cardiac asthma" unless we have also the signs and symptoms of asthma. There is another kind of breathing sometimes seen in heart disease—the Cheyne-Stokes—which does not show itself here, but was present in the girl I mentioned. The breathing comes to an absolute stop; I have seen it stop for a minute. You see it in heart disease, in Bright's disease, and in certain brain diseases. Those are the two kinds of dyspnea we see in cardiac disease.

If there is a sudden severe pain in the side you must remember the possibility of embolism. If it is in the lumbar region it may be due to an embolus of the kidney, and if followed by hematuria is almost certainly so. There are cases of embolus of the retina that sometimes baffle us. I was asked last night by a prominent physician to see one of his patients. It was an elderly man who, while waiting for a train, was suddenly seized with blindness, and was brought to Philadelphia by a friend. He could not see a thing. He thought he saw the flash of the ophthalmoscope, and was delighted to think he had so

much vision. The doctor could not detect signs of embolus. He had no paralysis in any part of his body. He had a poor heart, with atheroma of the vessels. We came to the conclusion that it was more likely to be a thrombus than an embolus—perhaps in the basilar artery. The indication seemed to be to stimulate the heart, and to-day the man can see a little. We gave him a little alcoholic stimulant; $\frac{1}{100}$ grain digitalin is being given about every five hours, with aromatic spirit of ammonia; and he is also getting iodide of potassium.

In regard to the Nauheim baths, I am glad to be able to indorse this method of treatment. It is being carried out in many sanitariums and in private houses in the country. I would not advise any one to use it in aneurism and in cases of genuine angina pectoris.

PERITONITIS, WITH PERFORATION OF SMALL INTESTINE; GUNSHOT WOUND OF THE ABDOMEN, WITH THIRTEEN PERFORATIONS.*

BY T. J. CROFFORD, M.D., MEMPHIS, TENN.

Mrs. W——, who had previously been in good health, was suddenly attacked with abdominal pain in October, 1897, which proved to be a peritonitis. The acuteness of the attack passed away, but a chronic inflammation lingered which, together with the adhesions that had formed, kept her constantly in more or less pain that was always increased by moderate exercise and made unendurable by violent exercise, by driving in a carriage or buggy, or by any exercise that jostled or called forth an effort. I saw her with her physician about February 25, 1898.

Upon examination through the abdominal walls or through the vagina we could make out no enlargement or growth within the abdomen, but on account of the constant pain and a frequent gaseous distention which the patient experienced we determined to operate. So ten days later, she having been brought up to me, the abdomen was opened in the median line. The greater omentum was almost universally adherent to the intestines, the appendix vermiformis, the bladder, the uterus, and in some places to the parietal peritoneum. After liberating the adhesions a perforation in the small intestine was found some three feet or more below the stomach. This opening was stitched up with fine silk by the employment of the Lembert suture. The ragged portions of the omentum after being ligated *en masse* were

* Read before the Southern Surgical and Gynecological Association, December, 1899.

pared off. The abdomen was now cleansed by irrigation with sterilized water and closed, a glass drainage-tube having been left in the lower end of the incision reaching the most dependent portion of the pelvis. Her recovery was uneventful. She has not been restored to perfect health, and she is not able to take active exercise without experiencing more or less pain thereafter. She wrote me six months ago that whilst she experienced more or less pain daily, she had increased in weight from 104 to 136 pounds. She was in good spirits and believed that she would be ultimately entirely cured. It is my impression that the pain is due to adhesions which formed in the repair following the operation. I am not able to assure her that she will be restored to perfect health, but believe that she will.

This is the first intestinal perforation that I have ever known to which I was not able to assign a cause.

For some time pathologists have been telling us there is no such thing as idiopathic peritonitis, that the foci of inflammation are the tubes and ovaries, the appendix vermiformis, and the liver with its gall-bladder and ducts.

The writer reported some years ago the result of a post-mortem on a boy of twelve or fourteen years which revealed two perforations of the small intestines. There were two large lumbricoid worms in the free peritoneal cavity near the liver. The boy was well and active up to three days prior to his death. His illness came on suddenly with the symptoms of acute peritonitis. The post-mortem verified the correctness of the diagnosis.

These cases may be taken in proof of there being other sources of peritonitis than those emanating from the above named foci.

Mrs. A——, aged twenty-five years, was shot in the abdomen at a distance of four feet by the accidental discharge of a 32-caliber Smith & Wesson pistol in the hands of her husband. The ball entered the abdominal cavity just to the right of the median line and about one inch below the umbilicus. This occurred on the 24th of April, 1897, at about 7 A.M. I saw her one hour later. She was suffering much pain. Her pulse was rapid, but of reasonably fair volume. Her face was pinched, and there were other symptoms indicative of shock and hemorrhage. An immediate laparotomy was proposed. This was accepted.

The hygienic surroundings were not good and the room was rather poorly lighted, but we did not think it advisable to move her. The patient was put on the table under ether anesthesia at eleven o'clock, about four hours after the shooting took place. The abdomen was laid open by a four-inch incision. The intestines were examined in

their entirety with great care, each part after examination being laid without the cavity and protected by warm sterilized gauze towels. There were found thirteen perforations, eleven being in the ileum and duodenum, whilst two were in the mesentery. The colon was uninjured. Frequent blood-clots were encountered, showing that hemorrhage had been free. Each perforation as it was found was closed with small Lembert sutures of fine silk; after which the cavity was washed out thoroughly, the intestines replaced, and the incision closed. A glass drainage-tube reaching to the bottom of the pelvis was left in the lower angle of the incision.

The shock from the operation was not profound. At 4 P.M. the temperature reached 103 2-5°, the pulse 120, but of fair volume. This temperature was in all probability due to absorption within the cavity. It rapidly declined, and by the next morning was practically normal.

The bowels were now moved by the administration of calomel and salines, and notwithstanding the many perforations no trouble was experienced on account of leakage. The drainage was moderate; the tube was removed after forty-eight hours. Her temperature did not rise more than one degree after this. Convalescence was rapid and recovery uneventful.

A few months later the patient became pregnant, the history of which presented nothing worthy of special consideration. On June 15, 1898, she was delivered of a large baby at term. She was in good health when I last heard from her, which was about one year ago. The family moved away.

A CORRESPONDENT of the *Medical Press and Circular* suggests that plague may be existent at present in England. This surmise is based upon the fact that some six or eight months ago there appeared at Southampton a disease which attacked dogs, and proved so fatal and infectious that in a short space of time the town was practically cleared of its canine population. Since then the disease, which appears to be of a highly specific nature, has spread slowly but surely over many parts of the United Kingdom. Deaths from this epidemic are occurring at the present time in London, and veterinary surgeons are now everywhere alert as to its occurrence. The points suggestive of plague are the invasion of a seaport town, where dogs might easily become infected through ship rats, and the fatal nature and the high degree of infectiousness of the malady. On the other hand, as our contemporary remarks, it is hardly likely that, if plague had really attacked so widely domesticated an animal, the contagion would not quickly have been communicated to man.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE DISEASES OF THE PHILIPPINES.

The interest attaching to the sanitary situation in the Philippines is one that will be permanent so long as our relations with those islands continue to be as intimate as they are at present. The report recently submitted by Dr. Simon Flexner to the Johns Hopkins University, on behalf of the committee sent out by that body to investigate prevailing diseases, is therefore of singular significance at the present hour.

The report refers, first, to the diseases affecting the natives. Skin diseases were found to be particularly prominent. Diseases of the scalp were frequent. Dhobie itch and an affection which resembles closely Aleppo boil were also found. Smallpox, of course, under the Spanish régime, had been so generally prevalent in Luzon that the natives had practically lost all fear of it. General carelessness seemed to have prevailed among the Spanish authorities, no attempt having been made to disinfect habitations, and vaccination even among the Spanish garrison had not been carried out. Owing to the vigilance of the American health authorities an epidemic of smallpox has been averted so far among Americans. In order to do this it has been found necessary to establish a vaccine farm in which young Carabao were used in the preparation of the virus. Luzon is a distinct focus for leprosy, the commonest forms being the tubercular and mutilating. It was found difficult to obtain accurate statistics regarding the prevalence of tuberculosis, but that the disease is common is indicated by several facts. Syphilis, by general agreement, does not prevail unduly, though other venereal troubles are numerous. One of the best known diseases among the natives is the well known tropical disease—beriberi. During Dr. Flexner's visit some two hundred cases developed in a few weeks at Cavite. This interesting form of neuritis

will probably be very fully investigated when the pathological material collected has been fully examined.

The chief causes of disability among the American land forces were, of course, the enteric diseases, diarrhea, dysentery, typhoid fever, and gastrointestinal catarrhs. Many of the diarrheas are preliminary to the symptoms of dysentery. Dysentery is responsible for the greatest amount of invalidation and the highest mortality. It appears in acute, subacute, and chronic forms. The whole of the large intestine is affected, and usually the lower portion of the ileum is involved. Amebæ were present or very difficult to find in fresh stools. The intestinal flora were studied by means of plate cultures, and the blood sera were tested for agglutination. Two groups of bacilli were thus differentiated, one having affinities with the group of bacillus coli communis, and the other having affinities with the group of bacilli of which the bacillus typhosus is the type. The bacillus of this second group, which is still under study, would seem to agree with the bacillus dysenteriæ isolated by Shiga from cases of endemic dysentery occurring in Japan. Experiments in immunization of animals, and also those having in view the production of a dysenteric vaccine, are in progress. Typhoid fever was prevalent to a large extent, but the number of deaths was less than from dysentery. A large number of malarial fevers were also recognized, the infections being mostly of the tertian and estivo-autumnal varieties. The Philippine Archipelago would be a very favorable site for the study of the relation of mosquitoes and other insects to malarial infection. A number of the American soldiers suffered from tropical ulcers. They were most frequent among those who had been compelled to make long marches through the marshes, and the patients attributed the ulceration to poisoning contracted in the marshes.

The experience of the committee on wound infections was rather limited. There seem to be no very special infections, however, most of the cases being those in which common pus cocci occurred. The committee reports the army surgeons as being enthusiastic as to the adequacy of the "first-aid package" in limiting the number of wound infections.

EDITORIAL NOTES.

A Radical Reformer.

Those who advocate active intervention in frustrating the calm intent of nature will be delighted by a book recently published, of which Dr. W. D. McKim, of New York, is the author. Dr. McKim

advocates the painless extinction in a lethal chamber of all idiots and defective and objectionable people. This improvement of society by artificial methods is much to be doubted. Do we do away with wickedness when we annihilate the wicked? The wicked after all are of some use, if only for the purpose of making the contrast possible between them and the reformers. A little use of an old prayer might be useful: "O God, be kind to the wicked, for thou hast been kind enough to the good in making them good already."

Bitter Experience.

The avoidable mortality under Christian science treatment grows daily of larger volume. This will ultimately be the means of convincing believers in this form of humbug of its falsity. Far more certain than any form of argument is a little experience. If it were not for the helpless children who are made to suffer through the false philosophy of their parents, a *laisser faire* policy should unhesitatingly be pursued in regard to this heresy. It is in the nature of foolish reason to appear excellent unto the foolish reasoner, some one has said, and it is undoubtedly unwise to protect the foolish too strenuously from the effects of their folly.

A Well-conducted Medical Department.

Critics of all nationalities agree in giving full praise to the army medical department of the British army now in action in Africa. There has never been any failure in providing adequate and complete care of the sick and wounded. Hospital accommodation has been ample. The hospital ships, mostly donated by private benefactors, have been splendidly served. Whatever faults there may have been in the campaign, and there have doubtless been grave ones, it is gratifying to find that the medical profession has been in the vanguard of progress and has not ignored the value of modernity.

A Preanesthesia Sedative.

Dr. Feilchenfeld, in the *Centralblatt für Chirurgie*, recommends highly the use of strophanthus to allay preanesthetic excitement. Those who are afraid of chloroform are quieted by the influence of the drug given in five-drop doses of the tincture one or two evenings, and on the morning before the operation. The hint is a useful one, and should certainly generally be tried. Any means of relieving this *mauvais quatre d'heure* before an operation is something surgeons cannot afford to despise.

ITEMS AND NOTES.

INFLUENZA is still rampant in Paris.

IT is thought that the plague has been overcome in Honolulu.

THE Mt. Pleasant, Iowa, Hospital for the insane was recently destroyed by fire.

THE fund for the erection of the tuberculosis hospital in Chicago now totals $15,000.

THERE are still a number of cases of smallpox in the eastern part of the Province of Quebec.

THE Portuguese government has announced complete disappearance of the plague in that country.

THE new medical directory of Great Britain contains the names of 35,651 qualified medical practitioners.

OF the 5000 Chicago pupils who have been examined by the medical inspectors of schools, 293 were excluded.

A SHORT time ago there arrived in New York City a steamer from Santos with one case of yellow fever on board.

THE meeting of the American Medico-Psychological Association will be held in Richmond, Va., May 8, 9, 10, and 11.

THE alumni of the University of Pennsylvania and Baltimore have organized an association and elected Dr. Howard A. Kelly president.

DR. LEWELLYS F. BARKER has accepted the position of professor of anatomy in the University of Chicago and Rush Medical College.

A SAIGON woman has given birth to twins joined together like the famous Siamese twins. The children are to be sent to the Paris Exposition.

ON account of non-compliance with the vaccination order, 835 pupils of the Terre Haute, Indiana, public schools have been excluded.

IT is learned from the annual report of the Denver Board of Health that there were 536 deaths from tuberculosis in that city during 1899.

THE University of Berlin recently expelled Dr. L. Arons, a privat docent in electricity, because he was a member of the social democratic party.

THERE will be an attempt made to establish a reformatory asylum in New York under State management for the habitual users of alcoholics and narcotic drugs.

DR. L. E. KEELEY, who made a large fortune through his gold cure treatment of inebriety, died of heart disease at Los Angeles, California, on February 21.

THE Infants' Hospital on Randall's Island, New York, has been placed under quarantine because of an outbreak of both diphtheria and measles in that institution.

AT the session of the Paris Academy of Medicine held January 30, Drs. Kaposi of Vienna, Erb of Heidelberg, and Hansen of Bergen, were elected foreign correspondents.

THERE is a bill now before the New York legislature which requires that all poisonous mixtures sold in quantities of less than eight ounces shall be put up in a bottle of distinctive pattern.

A CIRCULAR has been issued by the Illinois State Board of Health calling attention to the prevalence of smallpox in that State and urging wholesale vaccination of all communities.

ON February 20 the Supreme Court of Michigan issued an order directing the State Board of Medical Registration to show cause why it should not be mandamused to issue a certificate of registration to a certain graduate of the Independent Medical College of Chicago.

DR. BUCKLEY, editor of the *Christian Advocate*, said at a recent meeting that Christian science, as a system of therapeutics, would have died ere this if it had not been put forward as a religion; and it would have died as a religion if it had not been put forward as a system of therapeutics.

IN recent years the medical profession has not been so much in demand as formerly, and the decrease seems more marked throughout Austria this year. In Vienna 218 entered for the profession at Prague, 35 Dutch-speaking and 37 Czechs; Graz, 39; Innsbruck, 24; Lemberg, 13; Cracow, 11; making the small total for Austria of 377.

SURGEON-GENERAL STERNBERG delivered before the National Geographical Society of Washington a short time ago a lecture on the bubonic plague. He took up the germ origin, its history, development, and destruction, the prevalence of epidemics of past centuries, the large mortality, and the present history and treatment of the disease.

THE latest suggestion for cutting the umbilical cord and keeping it aseptic is due to the ingenuity of Professor Martin, of Greifswald, who advocates the use of curling-tongs heated to a white heat. He first ligatures the cord close to its attachment, and then burns it through, leaving a stump which is insusceptible to infection, and is safeguarded against accidental hemorrhage.

THE application, says an English medical journal, of a freshly-opened living pigeon to the head is still a popular remedy in France in cases of meningitis, and in the central market of Paris there is a poultry dealer whose specialty it is to provide pigeons for this purpose. She asserts that this branch of commerce is flourishing, and she has recently organized a farm in the environs for breeding therapeutical poultry.

THE *Medical Monograph* says if there is any reason why water should be withheld from a child afflicted with intestinal disease, it has not been satisfactorily demonstrated. One of these children, with a hot skin and parched mouth, restless and fretful, is as fair an indication of tissue drouth as could be desired. Give it water, not a teaspoonful but a tumblerful, and you will frequently see a wonderful change. Saturate it with water.

"PRESBYTIATRICS" is a name proposed for a new specialty in medicine devoted to the study of the diseases and conditions affecting the aged. It is claimed that we have now a special branch known as pediatrics, and there is no reason why, if the disease of the young are specially studied, the conditions affecting old age should be overlooked. It is claimed that hygiene of old age is relatively of greater importance than that of the early years of life.

THE *London Hospital* says: "It will be good news to many consumptive invalids to learn that a large sanitarium for consumptives will be opened, probably in November, at Helonau, in Egypt. The building will be open to the desert on all sides, and the roof will be utilized as a winter garden. The window casements are to be constructed for the unrestricted admission of air. Separate rooms with bath-rooms are to be provided, and about seventy patients will be accommodated."

FROM 1890 to 1895, says an exchange, 624,127 men and 129,155 women were sentenced to different punishments before the Italian courts. Of 100 infanticides, only eight were men. Theft was principally masculine; for 100 men, 24 women committed the same theft. Of 100 cases of poisoning, 70 were by women. In the south—in the

Abruzzes — out of 100,000 women, 554 were condemned annually. This rate decreases as one goes northward. The Venetian women are much worse than their northern latitude would lead one to suppose.

People unfamiliar with London have some difficulty in realizing the very serious overcrowding which exists in the poorer districts in the metropolis. The medical officer of Islington has just made a return which brings home in striking force the terrible destiny of our poorer population. In that parish there are 12,856 one-room tenements, occupied by 28,189 persons; 16,716 two-room tenements, with 60,639 persons living in them; 11,806 three-room tenements, with 40,762 occupants; and 8015 four-room houses, sheltering 41,740 people.

M. Fleury-Ravarin (*Philadelphia Medical Journal*), deputy of the Department of the Rhône, recently proposed a law for the creation of a national antituberculous institute, having as its object the study of the treatment and experimental research of the means to cure tuberculosis. The Society for Indigent Tuberculous Patients, of Lyons, propose to build the institute, at its expense, and to annex it to the free sanatorium. It is soon to open at Hauterville, in the mountains of Bugey. M. Fleury-Ravarin asks the State to give the new establishment 15,000 francs ($3000) yearly, with the title of a "national" institute.

According to the *Philadelphia Medical Journal*, the commission lately appointed to combat the spread of tuberculosis in France has formed two subcommittees — one for prophylaxis, with M. Lucipia (president of the Municipal Council) and Dr. Roux (of the Pasteur Institute) as vice-presidents; and the second for therapeutics, with M. Proust (inspector-general of the Sanitary Service) and Dr. Lannelongue (professor of surgery) as vice-presidents. Dr. Brouardel, dean of the Medical School, is president of the commission. Cannes, Nice, Mentz, Beaulieu, Grasse, Hyères, and other cities of the Riviera, have recently been advocated for phthisical patients.

The Supreme Court of Illinois, says the *Medical Record*, has recently handed down a decision in a peculiar case. It was that of an infant who claimed damages for a deformity alleged to have resulted from injury to the mother before its birth. The mother, while pregnant, was injured in an elevator accident at St. Luke's Hospital, Chicago, her left leg being caught and crushed. When the child was born, his left leg was deformed. The hospital authorities settled with the woman for her injuries, and then she brought suit in

the child's name for $50,000 damages for the deformity, which it was claimed was due to the same accident. The court dismissed the suit on the ground that at the time of the accident the child could not be credited as a separate being, capable of sustaining an action independent of the mother.

At a meeting of the Section on Medicine of the New York Academy of Medicine, held December 19, 1899, Dr. Henry J. Garrigues (*Philadelphia Medical Journal*) presented a communication on premature burials, which was preliminary to the exhibition, for the first time in this country, of a remarkable device for communicating to the outside world the fact that a person has been buried alive. Dr. Garrigues made no secret of his belief that persons were not infrequently buried alive, and gave as his reasons the many reported cases of narrow escapes from such a fate, the absence of any reliable sign of death except decomposition, the laxity of our laws regarding burial, and the carelessness of physicians concerning the certification of deaths. The apparatus exhibited is the invention of Count Michael de Karnice Karnicki, chamberlain of the Emperor of Russia. It consists of a four-inch metallic tube communicating with the coffin, and a securely fastened metallic box at the upper or distal end of this tube, containing the signaling mechanism. Within the tube already mentioned is a lever connected with a trigger. Either a push or a pull on the lower end of this lever by the occupant of the coffin suffices to release the trigger, whereupon a large gilt ball is raised in the air, air and light are admitted to the coffin, and an alarm bell is made to ring continuously for half an hour. For those who do not think these means of communication sufficient, an arrangement is provided for discharging a sky-rocket and exploding a bomb. It is certainly reasonable to assume that by all these means combined it would be possible to attract the attention of even the phlegmatic caretakers of a cemetery, in the event of other and more impressionable human beings not being within earshot. At all events the apparatus does what is claimed for it, or at least it did at the academy, where the exhibitor had the trifling advantage of the assistance of a lively corpse in the coffin. When after a sufficient lapse of time the apparatus is no longer needed, the tube is pulled up out of the ground, and the device is ready for application to another grave. The apparatus, it is said, cannot be tampered with from the outside, and the coffin remains sealed until the projecting rod is disturbed from inside the coffin. As soon as the apparatus is taken away, a ball valve closes the opening in the coffin.

NEW PUBLICATIONS.

YEAR-BOOK OF THE THROAT, NOSE, AND EAR.

As another indication of the rapid and successful development of the allied subjects of laryngology and otology, a new volume has just appeared from the press of the Chicago Medical Book Company, entitled The Year-book of the Nose, Throat, and Ear. The first portion of the book, devoted to the nose and throat, is edited by Dr. Head, and the second portion, on the ear, by Dr. Andrews. Inasmuch as such rapid development is taking place in all departments of the subject of laryngology, much of the literature of the subject must appear in the current periodical journals rather than in a more stable text-book form. It has been the object of the editors of this work to give a comprehensive review of the more important articles of value that have appeared during the year 1899. In connection with a very complete index they furnish a list of all the periodicals to which reference is made in the body of the work. Without any effort to take up the discussion of mooted points of pathology or treatment, they give a very candid outline of the subject-matter of each article which has come under their observation. The book will be of great value to the laryngologist and otologist, and will also furnish the general practitioner a comprehensive idea of all the recent literature pertaining to any given subject. It is sincerely to be hoped that this little book will meet with prompt and ample success, sufficient indeed to encourage the editors to make it a standard annual publication.

The Year-book of the Nose, Throat, and Ear. The Nose and Throat, Edited by G. P. Head, M.D., Professor of Laryngology and Rhinology in the Post-Graduate Medical School of Chicago. The Ear, Edited by Albert H. Andrews, M.D., Professor of Otology in the Post-Graduate Medical School of Chicago. 8vo; 274 pp. Chicago: Chicago Medical Book Co., 1900.

THE TREATMENT OF DISEASES OF THE NERVOUS SYSTEM.

The needs of the general practitioner have been consulted and ably met in the preparation of this work. Too long has he been obliged to grope much and in many volumes before he could lay his hand upon just the desired practical therapeutic suggestion. There is a field for such a volume, and the author's large experience and known ability as a writer and teacher enable him to fill it well.

The general etiology of diseases of the nervous system, general means of prevention, the general application of remedial measures, are subjects well discussed in the earlier pages. Then follow valuable chapters upon hydrotherapy, electrotherapy, massage, exercise, rest, and occupation, psychotherapy, diet, etc., and great stress is laid upon the value of these important adjuvants to other therapeutic measures.

In the separate consideration of the various diseases of the nervous system, etiology and symptomatology are briefly summarized, and the best and most approved plans of treatment of each disease are then fully discussed.

Practitioners generally will give hearty welcome to this treatise, and it is bound to be distinctly helpful to the many. The literary style is good and clear, as also are paper and print. It is an attractive and valuable volume.

The Treatment of Diseases of the Nervous System. A Manual for Practitioners. By Joseph Collins, M.D. One Volume; 8vo; pp. xiv–602. Extra Muslin, $5.00 net. New York: William Wood & Company.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY.

The American Year-book appears this time in two handsome volumes instead of one, as heretofore. One volume deals with surgery and the other with medicine. The work has been most ably edited, and the labor of selection and condensation judiciously performed. For the practitioner desiring to review modern views of any particular subject, this epitome will prove invaluable, and for the literary man it will be indispensable for informing him of the stage of information arrived at in any particular department of medical science. In its present form the Year-book will be a welcome addition to the reference library.

The American Year-book of Medicine and Surgery. Under the General Editorial Charge of George M. Gould, M.D. Philadelphia: W. B. Saunders, 1900.

THE PROGRESS OF MEDICAL SCIENCE.

MEDICINE.

The Schott Method in Heart Disease.

V. Neesen (*New York Medical Journal*, March 10, 1900) reports a number of cases of patients with chronic heart disease who were successfully treated by the Schott method of bathing. The customary procedure is as follows: The baths are begun with a strength of from one to two per cent of salt and a temperature of 33° C. The duration of the immersion is usually stated at five or six minutes. This bath is prepared from the water of the natural spring after it has been stored in a reservoir for some time, and the carbon dioxide allowed to escape. The addition of a third of the volume of fresh hot water reduces the percentage of salt, at the same time raising the temperature from 30° to 33° C.

After every bath the patient is required to lie down—preferably undressed in bed—for an hour or more.

From such a beginning the strength of the baths is gradually increased and the temperature lowered by lessening the amount of fresh water added, until the natural temperature and saline strength of the spring are reached. The saline strength may then be increased as gradually as is desirable by the addition of the mother lye (rich in calcium chloride) obtained from the salt works.

The next step is to the Sprudel or carbonic acid bath, and then to the Strom Sprudel or flowing Sprudel bath—the strongest form of tub in existence.

The baths are not given continuously from day to day without a break. A patient can seldom stand more than three or four baths in succession. An interval of a day between every two or three baths is customary.

The effect of the baths is to strengthen the heart's action.

Tænia Nana a Cause of Chyluria.

In the *Russian Archives of Pathology* (tome viii, fasc. 6) Dr. Predtechenski, of Moscow (*Lancet*, March 3, 1900), reports a case of chyluria which is interesting for several reasons. It is the first case of the kind reported from Russia, though in other parts of Europe cases are occasionally met with in subjects who have not resided in the tropics. Dr. Predtechenski has been able to find some twenty of these cases in medical literature. The cause of

tropical cases is generally allowed to be some parasite—filaria sanguinis or distoma hæmatobium. In Europe strongylus gigas has been found, and some authors believe that tumors and other pathological conditions which cause stagnation of the chyle and lymph-streams may also produce chyluria. In the Russian case a parasite was detected; at least ova were found in the urine, which were diagnosed as those of tænia nana, a minute variety of tapeworm which is tolerably common in Italy but is almost unknown in England, though Dr. Ransom, of Nottingham, has reported the case of a girl from whose intestinal canal a large number of these parasites were expelled. Dr. Predtechenski's patient was an officer's wife, aged twenty-three years, who had at times passed turbid or milky urine ever since she was sixteen years of age. When seen by him the urine contained, in addition to epithelium, specks or small clots of fibrin, crystals of oxalate of lime, and red and white corpuscles, the last named having a single spherical nucleus and being in fact small lymphocytes. There were also found some spherical bodies looking like the eggs of some entozoon. They were nearly transparent, and under a good immersion lens were seen to possess six hooklets. Their diameter was from 20 to 25 μ, and they agreed with the figure of the ova of tænia nana in Mosler and Peiper's work on Animal Parasites. It is suggested that the worm itself may have existed in the kidneys, as another variety—tænia Madagascarienis—is stated to have been found alive in the kidney of a patient suffering from chyluria. The parasite probably occludes the lymphatics and causes them to become distended and finally to rupture, so that the lymph finds its way into the urinary passages. The most efficacious treatment in this case appeared to be gallic acid in fifteen-grain doses three times a day.

A Plea for the More Extended Use of Antitoxin for Immunizing Purposes in Diphtheria.

J. S. Billings (*New York Medical Journal*, Feb. 17, 1900) says that the increased number of cases of diphtheria in New York City in 1899 was probably due in part to neglect of a most important prophylactic measure against the disease—*i.e.*, immunization by antitoxin. Immunization, says the writer, furnishes one of the most potent means of preventing the spread of diphtheria and lessening the number of deaths from this disease. It is probable that in some cases the immunizing dose of antitoxin hitherto recommended (150 units) is insufficient, and that at least 300 units should be used in children and 500 in adults. Owing to the improvement in the mode of preparation and the increased concentration of the antitoxic serums now in use, no ill effects are to be apprehended.

Hypochloruration in Epilepsy.

Toulouse (*Proc. Soc. Méd. d. Hôp.*, in *Progrès Médical*, 1900, p. 39) relates experiments made in collaboration with Ch. Ricket to ascertain the influence of sodium chloride upon the bromide medication.

Twenty patients affected with epileptic seizures, and ranging in age from seventeen to nine years, were subjected to diet from which the chlorides were as much as possible eliminated. A noticeable increase in efficiency of the bromides was the result, and the proportion of seizures was reduced by ninety-two per cent. Thirteen of these cases were entirely free of epileptic symptoms within two weeks from beginning of treatment. Those whose fits persisted in spite of the standard bromide medication report absence of seizures since withdrawal of chlorides in their diet, which procedure, although in itself devoid of beneficial consequences, has the power of potentializing the therapeutic efficiency of the bromides.

Ten Years' Experience in the Treatment of Enteric Fever by Systematic Cold Bathing—The Method of Brand.

J. C. Wilson and J. L. Sallinger (*Philadelphia Medical Journal*, March 3, 1900), in a paper on enteric fever based upon an experience of 1904 cases, say that the treatment by systematic cold bathing does not avert or diminish the frequency of hemorrhage; that the frequency of the occurrence of perforation is diminished, and that it diminishes the danger of the complications, especially those relating to the respiratory and circulatory tracts; that it is apparently attended by a somewhat increased frequency of relapse, though the general statistics in regard to relapses are entirely unsatisfactory; that the treatment is attended by the occurrence of albuminuria in a large percentage of cases; that it has no influence in increasing the danger of otitis media.

SURGERY.

Spinal Fracture Paraplegia.

Robert Abbe (*Medical Record*, March 3, 1900) reports a series of cases of spinal fracture, and says that the immediate signs and symptoms of fracture paraplegia give accurate data for prognosis.

If loss of sensation and motion below the injured part is complete and instantaneous, and the patella reflex (knee-jerk) is lost, the outlook for recovery is almost hopeless. Yet knee-jerk, sensation, and motion may be absent, and recovery take place after operation.

Partial loss of sensation or motion gives hope that a large degree

of recovery may be looked for, the cause in such cases being hemorrhage within the central canal or in the cord substance and meninges. Distribution and absorption of blood-clot take place usually within ten days or a fortnight, and returning sensation follows.

Return of motion in complete paraplegia cases does not always go on to perfect restoration. Wrist-drop of one hand, or dragging of one foot, may still remain two or three years after.

In cervical fracture paraplegia the fifth vertebral body is most often injured, hence the phrenic nerve derived from the third and fourth branches of the cervical plexus gives the only supply to a respiratory muscle, to wit, the diaphragm.

The labored respiration by diaphragm only usually results in pulmonary edema and hypostatic pneumonia a few days after the accident. This may be overcome by nitroglycerin internally and frequent change of posture.

Intestinal fermentation with temperature disturbance easily occurs in high paraplegias, and is speedily relieved by calomel.

Regeneration of a pulpified cord is impossible. Restored function is probably always due to absorption of blood, or of the secondary inflammatory deposits which prolong the pressure symptoms.

The persistence of bone pressure at the site of injury justifies operation as much as in depressed fracture of the skull, because through pressure an injured cord must be further degenerated.

Laminectomy should be done as promptly as possible. If the subject be favorable, it may be done by expert use of cocaine. It will be less painful if done before local meningitis sets in.

An *x*-ray view of the fracture can be readily taken in these cases by from ten to fifteen minutes' exposure, and greatly aids the surgeon.

Can the State Suppress Genito-urinary Diseases?

In a paper on this subject F. C. Valentine (*Journal of the American Medical Association*, March 3, 1900) says that sufficient of the physiology and pathology of the genito-urinary apparatus should be taught, in institutions for higher education, to convey to students the dangers of genito-urinary diseases to themselves and to others.

Similar instruction should be given in schools attended by boys at the age of puberty.

No man who has ever had gonorrhea should be allowed to marry until it is proved by a physician that he cannot infect his wife.

Regular physicians should be elected, by their societies, to deliver evening lectures to the public on genito-urinary diseases.

Every father should be taught to warn his sons of the dangers of

genito-urinary diseases. When from incompetency or delicacy the father cannot or does not wish to do this, the family physician should discharge that duty.

Every medical society should elect its most competent member to write at least one article on the subject, worded for laymen's comprehension, and to be published under the auspices of the society.

On the Restoration of Coordinated Movements after Nerve Section.

R. Kennedy (*Lancet*, Feb. 17, 1900) reports making a number of experiments, and says that from the physiological and histological results of them the following conclusions may be drawn:

1. That after section and immediate coaptation of a nerve, restoration of conductivity and of voluntary function may be effected in a few days.

2. That this early restoration of conductivity need not be the result of reunion of the old nerve fibers—*i.e.*, reunion by so-called first intention, or without Wallerian degeneration—but may be the result of regeneration of young nerve fibers in the peripheral segment.

3. That voluntary coordinated movements are regained equally soon, whether the two ends of the divided nerve are united as accurately as possible, so as to bring the corresponding ends of the nerve fibers into contact as nearly as possible, or whether previously to reunion the peripheral segment is twisted so that when united to the central segment non-corresponding ends of the nerve fibers are brought into contact.

4. That in the latter case the microscopic examination of the seat of reunion leaves it doubtful whether the restoratiou of function is due to the reestablishment of the old paths of decussation in the nerve cicatrix or to the reunion of ends of nerve fibers which do not correspond but which happen to be brought into apposition.

5. That in suturing a divided nerve no trouble need be taken to secure that coaptation of the two segments which is effected in the old relationship, the simple approximation of the two ends, no matter in what relationship, being all that is required.

Retroperitoneal Sarcoma.

J. D. Steele (*American Journal of the Medical Sciences*, March, 1900) says that retroperitoneal sarcomata, while rare, occur with sufficient frequency to warrant more attention from the standpoint of diagnosis than they have heretofore received. Males appear to be

somewhat more predisposed to the affection than females (60 to 40 per cent). These tumors are very quick in their growth, the average duration in thirty cases being 8.7 months. They usually originate in the lumbar region (57 per cent). The next most frequent seat is the central portion of the posterior wall of the abdomen about the attachment of the mesentery (41 per cent). Two per cent grow from the pelvis. Metastasis is not common. The onset of these growths is insidious. The earliest manifestations of their presence are functional disturbances in the digestive tract. The first symptoms that are at all characteristic are those of pressure upon the lumbar sacral nerves and upon the venous supply of the lower extremities, manifested by neuralgic pains or edema of the feet and legs. In the earlier stages the physical examination is uncertain and difficult. In the middle stages the colon is pushed up and lies upon the anterior surface of the tumor. Beyond determining the retroperitoneal nature of the growth and its malignant character, the diagnosis is very difficult. The pressure symptoms and evidences of intestinal obstruction are the most valuable differential points. An exploratory incision is the only sure method of determining the position and character of the tumors that have been shown to be situated behind the peritoneum. Surgical interference offers the only opportunity for prolonging the patient's life.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Skin Rash Following Enemata.

Monro (*Glasgow Medical Journal*, September, 1899) calls attention to the rash which sometimes follows rectal enemata. The reported cases are all in the English language, and all but one are found in British literature. Constipation is a common condition, and females preponderate in the list of observations. The author has collected twenty-six cases from the literature, to which he adds six of his own.

The eruption may occur in patients who have previously used enemata without any such effect, and subsequent enemata may or may not act in the same way. Usually the interval between the injection and the appearance of the eruption is about twelve hours, but it may be as long as twenty-four or as short as two hours, and the eruption's average duration is two or three days. In type the eruption is either scarlatiniform, morbiliform, or urticarial of the small

type. Occasionally these forms may be combined. The seats of predilection are the buttocks and thighs and the face, but any portion of the body may be invaded. Slight changes in the temperature and in the pulse have been noticed, and occasionally there is redness of the tongue and fauces. Constitutional symptoms are usually wanting. There may be considerable burning and itching. The eruption occurs only after enemata of large size, never after glycerin or nutrient enemata.

It has been generally assumed that the cause of the eruption is fecal absorption, which is partly excreted by the skin and causes the rash. Morgan, in 1895, suggested that it was due to a particular kind of soap, and Gardner thought that it was often produced by the use of hard yellow soap. Others have stated that the eruption follows three to four per cent of the enemata, and that it is common also after a strong aperient in chronic constipation. The writer asserts that experience has shown that soft and not hard soaps ought to be used in enemata. Six new cases are described.

In the first case, that of a woman of twenty-five, who was being treated for hemorrhage from gastric ulcer, the patient had had for about a week before the appearance of the rash nutrient suppositories, and enemata of milk, eggs, and beef tea. She had also had laxative enemata of soap and warm water, and, on one occasion, of castor oil every two or three days. Dilute hydrocyanic acid and chloroform water were the only drugs employed. The eruption was an erythema not sharply bounded, in some places distinctly elevated, affecting the face very slightly, well marked on the right upper arm and forearm and on the thighs, slight on the hands and legs.

In the second case, that of a woman of twenty-two, an eruption of a morbiliform character appeared about twenty-four hours after an enema of soap and water. The eruption was very pruritic, and was most marked on the trunk, although later it was actively present on the arms and legs. It is admitted that in this case the administration of chlorodyne at the same time as the enema renders the etiology somewhat doubtful.

In the third case, the day after several enemata of soap and water had been given for pain in the bowels, there appeared a diffuse erythema of the face and hand. Morphine had been given hypodermically the night before the eruption appeared.

The fourth case was that of a governess, who had after an enema (and the administration of chloroform) a general scarlatiniform eruption accompanied by fever. There was some redness of the fauces, but the tongue was not characteristic of scarlet fever. At the end of three days, when the patient was last seen, the eruption had practi-

cally gone from the extremities, but was well marked on the hips and thigh.

The fifth case, a woman of twenty-two, was in the beginning of her second week of typhoid fever. Twelve hours after an enema of hot water with soap and castor oil she was awakened by itching of the arms, neck, and face, and the next morning there was a pretty general urticaria present. The same result followed a second enema, while a third one was not succeeded by any eruption. This patient had previously used enemata of soap and water without any cutaneous disturbance.

The last case, one of gastric ulcer, developed an itchy, papular eruption on the face, hands, and thighs, a few hours after an enema of water, soap, and castor oil. This eruption extended rapidly over the whole body. A second enema a few days later was followed by the same appearances. — *Boston Medical and Surgical Journal*, Feb. 22, 1900.

Pseudomucinous Cystadenoma Associated with Diabetes.

Beyea (*American Journal of Obstetrics*, February, 1900) presents an interesting paper on this subject, with the report of a case. His conclusions from the study of the literature are as follows:

1. In rare instances where disease of the female internal genital organs is associated with diabetic symptoms, and a large quantity of sugar is found in the urine, the diabetic symptoms and sugar in the urine seem to be dependent on the disease of the genital organs.

2. In other cases the excretion of a large amount of sugar by the kidneys without diabetic symptoms seems to be dependent also on the disease of the female internal genital organs.

3. Since, in every case of any class or classes of disease of the female internal genital organs, no such association has been observed, it is probable that in order to produce the diabetic symptoms, and excretion of sugar by the kidneys, there may be present, in addition to the disease of the genital organs which we are able to recognize, some special and separate lesions or abnormal secretions of the genital organs, or some affection of other organs, or some special predisposing condition of the body.

4. That such cases of diabetes as are here described, and those cases to which Tait and Lecorche have given the name "climacteric diabetes," may be cured by the induction of the climacterium, the removal of gross disease which allows the completion of the climacteric change, or by the progress of the normal climacterium.

The writer believes that the subject of association of disease of

the internal organs of the female with glycosuria and diabetes is worthy of serious consideration, and that there is sufficient evidence of an etiological relationship between the two diseases to stimulate careful observation of cases of this class and experimentation aiming to determine the question of cause and effect.

General Exploration of Abdominal Contents when the Abdomen has been Opened for Operation.

Homans (*Boston Medical and Surgical Journal*, Feb. 22, 1900) recommends that in all instances where a long incision has been made through the abdominal wall for the removal of good-sized pelvic tumors, the hand be introduced and other organs of the abdomen investigated, particularly where there are unexplained symptoms of pain and discomfort.

Often disease of other structures than that for which operation is undertaken may be discovered, and their removal result in greater benefit to the patient than the removal of the tumor for which the abdomen was opened. This is particularly true in the instance of unsuspected gall-stones.

In the case of the short incision the writer does not recommend that the opening be enlarged, but in all other instances exploration is advisable.

THERAPEUTICS.

Strict Milk Diet in Diabetes.

In an article in which they bring to notice the beneficial results of a milk diet in diabetes, Winternitz and Strasser (*Centralblatt für Innere Medicin*, No. 45, 1899) come to the following conclusions:

1. A strict milk diet will in a short time, often after forty-eight hours, render the majority of diabetics free from sugar or reduce most markedly the excretion of sugar.

2. This is true for those in early life who have usually a severe form of diabetes, as well as those who are very adipose or where the diabetes follows injury or shock. Cases which by strict diabetic diet and after a Carlsbad cure have not been entirely free from sugar, show, after a strict milk diet, a further diminution or even complete disappearance of the sugar.

3. In diabetes associated with albuminuria and nephritis the albuminuria diminishes, and in some cases disappears, shortly after the disappearance of the sugar.

4. In many cases by strict milk diet, after disappearance or

diminution of the glycosuria, acetone occurs in the urine, or when previously present is increased.

5. In many cases, by the change from the milk cure to a mixed diet, the sugar which has entirely disappeared recurs in greater or less quantity. The renewal of the strict milk cure again induces a complete disappearance.

6. In the passage from a strict milk diet to a mixed diet, it has not yet with certainty been determined if green vegetables and cereals are not to be preferred to meats.

7. Some cases are entirely healed by the milk cure, and remain well with a mixed diet containing an abundance of starches.

8. In most cases there is in the beginning a slight decrease in the body weight, but in a short time it remains stationary, and even an increase in weight may follow.

Chloretone as a Hypnotic.

According to W. M. Donald (*Therapeutic Gazette*, Jan 15, 1900) this substance is a hypnotic, analgesic, anesthetic, and antiseptic. It is a trichlor-tertiary-butyl alcohol. It is prepared by adding caustic potash to equal weights of chloroform and acetone, and occurs in white crystals and has the odor of camphor. It is slightly soluble in water, but freely so in alcohol and ether. It is best administered internally, in the form of tablets. It is especially valuable as a hypnotic and local anesthetic, as it is free from depressing after-effects, and is safe even when administered in large doses. The writer describes the case of a patient who had been addicted to alcohol and morphine, and who, as a result of pain and sleeplessness, took 120 grains of chloretone in twenty-four hours. Drowsiness was persistent; coordination was badly impaired, but muscular power was not lost. There was a loss of the pain sense, and general anesthesia. The drowsiness continued for several days. At the end of that time full consciousness was regained with no untoward results, excepting a gastric irritation which had been present before the dose was taken. As a result of this very large dose the sleep continued for six days.

The Insolubility of Trional.

Pouchet (*Bulletin Général de Thérapeutique*, Dec. 8, 1899) refers to the inconvenience arising from the sparing solubility of trional in hypnotic doses, and suggests that the usual plan of giving it in cachets is responsible for the inconstancy of the results obtained with it. He states that it is soluble in oil of sweet almonds in the proportion of 1 in 20 at ordinary temperatures (20° to 25° C.). From this an emulsion

can be prepared, and so the dose, and consequently its hypnotic effects, easily regulated. He suggests that it may be given in the following combination: Trional 1 part, oil of sweet almonds 20 parts, sugar 8 parts, gum arabic $\frac{1}{8}$ part, tragacanth $\frac{1}{5}$ part, orange-flower water 10 parts, and cherry-laurel water 2 parts. The emulsion is to be given in water or milk. The proof that the trional is completely dissolved is that none remains behind when the preparation is filtered. Another way of administering the drug is trional ½ to 1 part, oil 10 to 20 parts, with the yolk of one egg and 150 parts of water.

Cervello's Method of Treatment of Phthisis.

Liebrich (*Medical Press and Circular*, Feb. 28, 1900), in a paper read before the Berlin Medical Society, said that in this method the one great point was to raise the vital power of the cells and their power of resistance to the tubercle bacilli and other toxins. Commencing disease could be recovered from. One could not stand still at that, however, but had to go back to pharmacodynamics. Cervello had done this. He heated a formalin-iodine preparation on a spirit lamp, whereby formalin vapor was given off in the sick-room, where the patient was made to breathe it for hours together. It caused no irritation of the air-passages. Cervello, who has the finest sanatorium in the world at Palermo, had, according to his own statements, obtained very favorable results in his case.

Normal Saline Solution in Malignant Jaundice.

Lenez and Schneider (*Archives de Méd. et Pharm. Mil.*, January, 1900) report a case of icterus complicated with absolute coma, convulsions, and scanty urine. Injection into the connective tissue of the right iliac fossa of one quart of sterilized normal saline solution, seven per cent, repeated after six hours, brought about a return of consciousness occurring within a few hours and consequent upon the voiding of enormous quantities of urine and fecal matter. Two more injections were made on the day following, after which the patient proceeded to complete and uneventful recovery.

Naphthalin for Pinworms.

A. Borini (*Gaz. d. Osped. e d. Clin.*, 1900, No. 3) recommends the exhibition of 1.5 grammes of naphthalin *pro die* for the treatment of pinworms. Protracted cases are cured in short order, and within a few days not even eggs of the oxyuris are any longer to be found in the stools.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

A New Treatment for Hay-fever and Coryza.

The *Laryngoscope* for February, 1900, quoting from the *Medical Council*, mentions a new use of heroin suggested by Dr. Wetherby, of Wilkesbarre, namely, in hay-fever and acute coryza. In these conditions he recommends the following formula:

Heroin	1 grain.
Atropine sulphate	1-25 grain.
Caffeine citrate	15 grains.
Salophen	75 grains.

M. Ft. caps. No. xv.

In the author's own case of hay-fever one capsule was sufficient to relieve the sneezing and the profuse nasal secretion, and four capsules a day kept him perfectly comfortable. Since this favorable experience he has prescribed the treatment in a number of cases of coryza and hay-fever with equally positive results in every instance. He believes that by its use we can promise immediate relief to the large army of coryza patients so common at this season of atmospheric changes.

Indications for Operative Interference in Adenoid Vegetations.

Hagedorn, of Hamburg (*Internat. Centralbl. für Laryngol.*, etc., No. 2, vol. xvi), in an interesting discussion of this subject, very briefly and succinctly sums up the points as to when operative interference is demanded as follows:

1. If the nasal breathing is not entirely free.
2. If frequent inflammatory processes arise in the throat.
3. If disturbances of the brain appear.
4. If nervous symptoms, such as convulsive attacks of cough, nocturnal enuresis, headache, and aprosexia make their appearance.

The Tonsils and Tubercular Infection.

Scheibner (*Internat. Centralbl. für Laryngol.*, etc.) has published *in extenso* in *Ziegler's Beiträge* the report of his work in investigating this subject. His results are not unlike those obtained by Leo Lewin, of Breslau (see abstract in this department, Medical Age, vol. xvii, No. 22). Scheibner first examined fourteen faucial and fifteen pharyngeal tonsils extirpated from living individuals from three to seventeen years of age. These specimens were examined histologically for tubercle and for bacilli. In one case there appeared to have

been a healed tubercular process. He found true tubercles and giant cells twice—bacilli in no case. In both cases where the findings were positive the author concluded that he was dealing with a mediate or intermediate aspiration tuberculosis.

The author further examined the tonsils from thirteen cadavers free from tuberculosis, from six cadavers with healed tuberculosis, from four cadavers with slight latent tuberculosis, from six cadavers with wide-spread pulmonary tuberculosis, from two with miliary tuberculosis but no pulmonary phthisis, from one with tubercular meningitis without pulmonary tubercle. Among this latter group of thirty-two cases he found two—probably primary—of tuberculosis of the tonsil.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Intoxication from Eserine Collyria.

Roubinovitch (*Proc. Soc. Méd. des Hôp.*, in *Progrès Médical*, Jan. 27, 1900, p. 56) reports the case of a patient, eighty years of age, affected with arteriosclerosis and complicated chronic bilateral glaucoma, for which two drops of eserine solution (0.5 per cent) had been instilled into each eye twice a day for three years. For eight months this instillation of one milligramme of eserine sulphate has been followed each time by fluctuations in the rectal temperature, acceleration of the pulse, tonic convulsions of the limbs, sensito-sensorial and psychic disturbances, loss of muscular sense, visual and tactile hallucinations, delirium, and stertor. These phenomena persist from two to three hours and resemble those traceable to certain intoxications.

Suppression of the eserine treatment is followed by disappearance of the symptoms. Eserine affects the sympathetic and produces contraction of unstriped muscular fiber. Arteriosclerosis seems to further the disturbing influence of the drug upon cerebral circulation; and Roubinovitch concludes from these data that the use of eserine collyria in aged individuals affected with arteriosclerosis is to be deprecated.

A Case of Recurrent Retinal Hemorrhage.

Dr. E. G. Janeway presented before the Practitioners' Society, New York (*Medical Record*, Feb. 24, 1900), a patient, male, aged thirty-eight, who had suffered from four attacks of hemorrhage into the retina. In the first attack, which occurred about four years ago, there was a hemorrhage into the retina of both eyes; in the two

subsequent attacks only the left eye was involved, and in the last attack the right eye. Dr. Janeway said the case was interesting on account of the location of the hemorrhages, and because no adequate reason could be assigned for them. They occurred when the patient was fatigued or while he was suffering from a cold or coryza. The man's heart was a little enlarged, and there was a faint systolic murmur. His urine was generally loaded with urates. There had been no hemorrhages elsewhere, and nothing of the nature of purpura. The sight of both eyes was much impaired. He had had rheumatism in earlier life, and diphtheria some nine years ago.

Dr. Charles S. Bull, after examining the eyes with an ophthalmoscope, said he regarded the case as one of choroi-retinitis disseminata, the inflammatory process being primarily in the choroid, with resulting hemorrhages. In one eye an extensive hemorrhage involving the macula had been followed by a large atrophic patch, leaving nothing but the sclera. The lesions were more numerous at the periphery than in the center of the field in the left eye. The blood-vessel walls did not show any ophthalmoscopic evidence of disease, and Dr. Bull was of the opinion the cause of the trouble was in the blood rather than in the vessel wall.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Lupus Vulgaris Affecting the Site of Vaccination.

At a meeting of the Dermatological Society of London, held on January 10, 1900, Dr. Graham Little (*British Journal of Dermatology*, February, 1900) showed a case of lupus vulgaris affecting the site of vaccination. The patient, a little girl of German-Jewish parentage, was born in December, 1891, and vaccinated in April, 1892, with calf-lymph in four places on the left arm, above the insertion of the deltoid. The upper two scabs fell off in a short time and the wounds healed; but the lower places never healed perfectly, and within six weeks from the time of vaccination "pimples" developed in the site of the lower scabs and insensibly passed into a large red sore. This became larger very slowly, and seems to have discharged "offensive matter" at intervals up to twelve months ago, since which time it has been perfectly dry. At present there is a patch of lupus 2⅛ by 1½ inches, the longer diameter transverse to the arm, partially occupying the outer lower and the inner lower scar of vaccination. The upper

two scars are quite free, and are well developed, healthy cicatrices. The surface of the patch of lupus is much fissured, and somewhat unusually scaly. There are three nodules of more recent origin at the margin of the main patch, but separated from it by healthy skin. There are two or three moderately enlarged glands in the left axilla. There are no signs of tuberculosis elsewhere. The father has suffered severely from smallpox. There is no family history of tuberculosis, except that one child, aged three, died of "bronchitis," having been treated at a hospital for four or five months. All the other children, six in number, are healthy.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Histology and Histological Diagnosis of Adenomyomata of the Uterus.

In an article on this subject J. C. Hirst (*American Journal of the Medical Sciences*, March, 1900) says that in the uterus of an adult were found embryonal epithelial inclusions from the mucous membrane of the uterine body (Muller's duct), situated in the peripheral subserous layer of the myometrium.

Isolated glands and cysts, included in the uterine wall and originating from the mucous membrane, are provided with a cytogenic tissue sheath, but not invariably.

This cytogenic tissue is found accompanying remains of the Wolffian body only when adenomatous proliferation is present in them; and this applies both when it occurs at the normal site of the paroophoron and in transposed portions of it.

Adenomata with glands and cysts *in scattered arrangement* are to be considered as from the mucous membrane as soon as they are provided with cytogenic tissue sheaths around the glands.

The epithelial ducts in the uterine and tubal wall, which have heretofore been characterized as aberrant canals from the Wolffian body, have not been proven as such, and are of uncharacteristic anatomical structure. For this diagnosis we must have specific figures of the paroophoron or connection with Gaertner's duct.

We have shown that the formation of subserous adenomyomata from these incorporated glands of the uterine mucous membrane is possible.

THE MEDICAL AGE

VOL. XVIII. DETROIT, APRIL 10, 1900. No. 7.

ORIGINAL CONTRIBUTIONS.

SOME REMARKS CONCERNING SUITABLE TREATMENT BEFORE, DURING, AND AFTER SURGICAL OPERATIONS.

BY J. A. JACKSON, M.D., MADISON, WISCONSIN.

That success does not always follow the work of those holding the higher seats in the synagogue is too tritely known to require comment; and that brilliant, artistic operators are by no means always the best all-round surgeons is a commonplace observation. "Important as it is to become a dexterous operator, it is still of far greater importance to become a successful one. The object of every operation is the removal of disease that either threatens the life, or that interferes with the comfort and utility of existence. And the more certainly a surgeon can accomplish this, the better will he do his duty to his patients, and the more successful will he be in his practice. Success, then, in the result of an operation, whether that result be the preservation of life or the removal of a source of discomfort, is the thing to aim at. To this dexterity and rapidity in operating are in a high degree conducive, but there are various other considerations equally or still more necessary, the solution of which can only be afforded by an intimate general acquaintance with the science of surgery and of medicine."

This excellent advice of one of the masters commends itself to our favorable notice. In truth, the most promising surgeon will be the one reared in an atmosphere of liberal knowledge of all the underlying principles of the art and science of healing in its broadest sense, and who possesses sufficient original breadth of comprehension to take in the perspective of the whole situation at a glance; one whose stock in trade is much more than mere technical familarity. Neither his genius nor his talent may be of the shining order, but they serve to light up the mass of facts, and quickly discern where the seeming

trifle oftentimes is merely the exponent of a high power. His mind is ever on the alert to receive a hint or catch a clue that leads perchance from a matter of detail to the discovery of an important governing principle.

The caution sign, warning against neglect of details, has long been posted on the field of surgery, but enticing pastures have oftentimes led to a disregard of the peril until overtaken by disaster. How often will it happen that a patient skilfully operated joins the silent majority, to the surgeon's mortification, who vainly seeks grounds for self-criticism in aught pertaining to the technique. Just how many victims have met their fate in consequence of disregard of previous inquiry concerning the rectification of organic or functional disease may never be known, but sad experience, by way of shock, asthenia, intestinal paralysis, and renal insufficiency, ought to prove a valuable instructor to teach us in future to prepare the subject for the coming ordeal.

Bacteriology has taught us, and as Bouchard and others have so well demonstrated, that the human body in health, and still more so when infected or disturbed, is a manufactory and storehouse of poisons, accumulation of which destroys health and may result in death, the only escape from which is secured by continuous elimination through the excretory organs. In short, either from actual increase in the blood or tissues of normal waste matter, or from accumulation of abnormal effete products, intoxication — in other words disease—is developed. These toxic agents found in the blood and organs are either mineral or organic, the latter being, in part at least, known as alkaloids, ptomaines, leucomaines, toxalbumins, etc. A toxic state may be the direct, or indirect, result of microbic invasion, or through ingestion of food, by either of which routes bacteria or their products are introduced from without.

Toxicity may, however, be induced by accumulation of ptomaines, leucomaines, and similar organic poisons resulting from faulty digestion, intestinal changes, imperfect metabolism, impeded destruction or elaboration in the liver and other organs, or from deficient oxidation. The pathological process set up may be more or less acute or chronic. Often the disease is well known and easily discriminated, as in the acute infections; sometimes, however, it may be indefinite and "diagnosis-defying." There are, of course, many other conditions besides extraneous infection and autointoxication that bring about an undesirable undermining of health precedent to or at the time of an operation. Just how far purely nervous or psychic influence may beget a toxic or otherwise perverted condition is not known, but this and other etiological considerations will be noticed later.

To rush a patient onto the operating table, except in pressing cases, without previous preparation savors strongly of the commercial spirit, and betrays ignorance of or indifference to propriety. Says another master of the art: "The preparation of a patient to undergo an operation is the first duty of the surgeon. Indifference on this point, except in cases of pressing emergency, argues great rashness and disregard of human life on the part of an operator." No reference is now intended, except to condemn, to that ridiculous fetish which prompts timidity or fear to uselessly postpone operative measures because of some imaginary need of building up the system when the general failure is clearly the direct outcome of local remediable disease. Quite often there is misinterpretation of causal relation and an illogical conclusion, wherein action means rescue from imminent danger, while to wait will give the enemy securer foothold. To put off relief of pain and suffering, or the evacuation of pent-up products, by timely action is scarcely less irrational than delay in arresting hemorrhage. The truth is, however, that the case must be rare wherein something in the way of rational medication will not find a fitting application, be it before, during, or after surgical interference.

Not infrequently individuals live in a treacherous state of quasi-health whilst tolerating an amount of effete material not yet arrived at the explosion point, but ill adapted to bear additional strain, and susceptible to severe derangement from any disturbing influence. The lesson to be learned from this is to inquire into the condition in every case even of apparent health, and provide against all possible contingencies.

As this is not intended in the nature of a complete exposition of everything pertaining to this important subject, being merely a running commentary, it will suffice to briefly summarize the general principles involved, and allude to the main facts claiming the operator's attention.

He should take in the whole situation, allowing nothing to escape his scrutiny. If emergency demands immediate action, he must respond promptly with full comprehension of his obligations and duties, and a clear conception of the objects in view. To save life should always be the leading indication. Simultaneously with relief of shock, arrest of hemorrhage, vital support, and disinfection of parts may claim precedence. No matter how severe the danger, prompt, vigorous, skilful measures may turn the scale in the patient's favor to the unalloyed joy of the surgeon, even in otherwise hopeless cases. While the head is lowered and the feet elevated, what blood remains will be nearer the vital centers. Heat, both internal and external; stimulants, strychnine, digitalis, nitroglycerin; subcutaneous,

intravenous, or rectal injections of sterilized normal salt solution, may each and all be in order. Much will depend upon the judgment of the surgeon, whose responsibility is grave, with reputation at stake, as to what extent these means shall be carried before proceeding to operative measures. Sometimes it will be wiser to quickly advance into the enemy's camp; at others his time will be better spent in restoring his patient. These, and similar measures to maintain heat and support the vascular and nervous systems, will usually fulfil the leading indications in urgent cases with grave asthenia, such as the severer injuries from infliction of great mechanical violence, certain examples of intra-uterine polypi and placenta previa, attended with extreme exsanguination, or in rarer instances of operative labor with great exhaustion. In cases of puerperal eclampsia, in addition to physiological antidotal treatment of the severe toxemia and convulsions, decisive measures, calomel, elaterium, or croton oil, hot air or vapor baths, diuretics, perhaps digitalis, and at times bleeding, for the rapid elimination of the urea and other toxic principles, must precede, go hand in hand with, and follow manual or instrumental delivery.

In the severer accidental cases, whether the next indication be that of preserving the integrity of a member or an organ, or should a formal operation like resection or amputation be called for, the patient will, in the majority of instances, be better fitted for undergoing the ordeal.

But aside from cases prostrated by sudden profuse hemorrhage and shock, we often encounter a dangerous degree of asthenia from slow continuous flow of blood, loss of sleep, and sapremia or septicemia, wherein, nevertheless, nothing short of operation will put an end to misery and restore health. Furthermore, on rare occasions we meet with innate tendency to bleeding in the hemophilic. These cases, in addition to such of the foregoing remedies as may be applicable, require special medication, by way of iron, astringents, quinine, ergot, with possibly hypnotics. In cases of minor importance, after deciding on operation, with or without anesthesia, it is well, should time permit, to administer beforehand a brisk cathartic to clear the intestinal canal of all fermenting and putrefying material. A few grains of quinine will tone the system temporarily, after which an anodyne to relieve pain, or a soporific to procure sleep or allay nervous apprehension, may also at times be serviceable.

In anal, rectal, perineal, and vaginal operations, the catharsis should be more thorough and the rectum well flushed, for it is very undesirable that early or numerous passages interfere with perfect rest and apposition of freshly united surfaces, or that the wound should be so soon contaminated, necessitating frequent

redressings. In genito-urinary cases of all parts of the tract, especially in those demanding subsequent catheterization, it is requisite, in addition to making the accessible parts aseptic, to render the urine as bland, unirritating, and antiseptic as possible, by diuretics, salol, boric acid, etc.

In cases involving intestinal obstruction, strangulated external or internal hernias, intussusception, and the like, attended with fecal vomiting, previous lavage of the stomach economizes strength by lessening peristaltic action, retching, and vomiting. It may diminish distention above the strictured point. After the stomach and upper end of canal are emptied by the siphon-acting soft-rubber tube, subsequent use of mild antiseptic liquids will measurably arrest the putrefaction and reduce the danger of ptomaine poisoning. And for a somewhat similar purpose and in comparatively like manner, often to a greater extent can copious enemata and free colonic flushing be made useful in certain conditions of the lower bowel as adjuvants to more serious procedures.

It is, however, more to the point of the subject in hand, to consider more *in extenso* the list of operations having for their purpose and object some great ultimate benefit to the patient in the removal of otherwise incurable disease, with preservation of life and restoration to usefulness and happiness. Types of these "operations of expediency" can be found in the removal of the cancerous breast, lithotomy and litholapaxy, radical cure of hernia, resections or amputations in chronic disease of bones and joints, and intra-abdominal operations.

In these and such like cases there is, as a rule, plenty of time allowed for suitable preparation of the patient, which should be one of the first duties of the surgeon, and for the neglect of which there ought to be no excuse, for there are occasions when no amount of skill will make up for this deficiency. He should, therefore, survey the whole field and take an inventory of all the facts pertaining to the case in hand, and whilst carrying out the general principles governing the usual course of making ready, he should seek carefully for and meet any and all special indications. As a matter of course, climate as a usual thing cuts no figure for obvious reasons, save in very rare particular cases. Local conditions and seasons have more weight, for the house and surroundings may often be rendered more salubrious, and the operating-room and sleeping apartment made aseptic, and sometimes it may be better to postpone operation until more seasonable weather. But even the vicissitudes of atmospheric conditions may be tempered by ventilation, warmth, etc. In extremely cold weather the principal room must be kept at a temperature of not below 65° to 70° F., whilst during operation liable to be attended

or followed by shock, the degree of heat should be in the neighborhood of 80° F. or over. On the other hand, during the uncomfortable warmth of midsummer, ventilation, fanning, and cool sponging will contribute to comfort and aid toward uneventful recovery.

During the prevalence of any serious epidemic or endemic it will be wiser as a rule to put off operations admitting of delay, for many individuals need but a slight cooperating cause like traumatism to succumb to an attack, and others apparently healthy may be less able than ordinarily to sustain the extra strain.

Likewise, if the patient be suffering from any intercurrent, unconnected affection of temporary duration, wisdom will prefer to withhold the knife until recovery. Furthermore, at times there may be acute exacerbations, directly the result of the ailment, calling for interference, which latter can be more skilfully and safely managed after subsidence. Pyrexia can sometimes be lowered, inflammation relieved, and sepsis controlled by cathartics, quinine, etc., and by soothing applications, preliminary incisions or evacuations of pus, free irrigations, etc.

In a measure age undoubtedly comes in for consideration in more ways than one. Children we know do not bear the loss of blood well. The recuperative power of youth is a well-attested fact, but the sudden consciousness of lifelong crippledom saps the ambition and sometimes defeats the surgeon, whose intense sympathy and consoling assurances are then much in demand. Old people with damaged arteries, bronchial catarrh, and insufficient organs neither bear anesthetics well, nor is there the buoyant hope of earlier years.

Women, if not overcorpulent, bear operations well, and they stand pain and loss of blood if anything better than men. Pregnancy bars out all interference, save when delay is more dangerous. A menstrual period, whilst not always a serious obstacle, is undesirable, the time of election being between five days after and about ten days preceding a period. Females are liable to hysterical manifestations, and seem to be more prone to post-traumatic delirium, partly because of the intrinsic nature of the operation so often required. Temperament, idiosyncrasy, and habits influence results, and may call for modification of treatment. In persons of extreme susceptibility and apprehension, the comforting assurance of an honest, confident operator will act as a tonic and allay fear. With such there should be no useless procrastination, and a hypnotic should procure a previous good night's rest and sleep.

Overeaters, and especially alcoholics, ought to be put on abstemious regimen, and the tendency to delirium tremens in the latter forestalled by bromides, diet, strychnine, and sleep. It is sometimes

advantageous to institute preliminary training in what will be required afterwards, as, for instance, use of crutches or wearing some appliance; and inconvenience and discomfort from inability to urinate or defecate can be measurably overcome by previous use of bedpan, etc. Rest and quietude of body and mind are essential in all cases; cheerful thoughts, hopefulness, and sound sleep are conducive to success. For this reason, except in trivial cases, it is advisable to keep the patient in a properly prepared bed with aseptic surroundings. This is especially true of celiotomies.

The bowels should be thoroughly emptied, not in a perfunctory manner, but by alternate doses of calomel and salines, during the previous week, and for all intra-abdominal cases the intestine should be disinfected by safe antiseptics like charcoal, salol, bismuth, beta-naphthol, etc., that arrest fermentation and putrefaction, and transform this channel into an efficient drainage-tube instead of a dangerous cesspool. These and other stimulants to the liver will increase the destructive and reducing functions of this organ. After this the diet should be as strictly aseptic as possible, carefully selected and prepared.

"Any irregularities of digestion can be much better corrected before than after the operation. The convalescent from a surgical operation is often kept back and fails to gain strength because of gastric disturbances which might have been corrected beforehand. The same is true of the hepatic functions, any catarrh of the biliary passages," etc.

The skin should be aroused to its highest perfection by repeated full baths of proper temperature, the beneficial effects of which are numerous and manifest.

The condition of the lungs must be known by careful exploration. It will often be difficult to decide if it be wiser to operate or to decline, in view of existing pulmonary disease, or to determine if the latter or any other local disease has the right of priority in the causal relation. It must not seldom decide the question of general anesthesia, and the choice of the agent used.

The condition of the heart and vessels should be known and appreciated, for whilst cardiac disease is not often a distinct barrier against operation, cardiac weakness frequently demands extraordinary supporting measures, like digitalis, strychnine, nitroglycerin, etc., before, during, and after operation.

Finally, and because the most important of all, the kidneys and the urine should receive serious and careful attention, for of all the organs the kidneys are the chief eliminators of the poisonous principles that, but for their rapid and constant discharge with the urine,

would accumulate in a short time to a point inconsistent with life. Indeed, it might in truth be said that sound renal organs augur favorable results, whilst on the other hand the prognosis will be unfavorable in proportion to the renal insufficiency. Careful microscopical and chemical examination should determine as nearly as possible their exact condition, and if proved to be below the normal standard, prompt and energetic measures should be started at once if operation be determined upon. Small doses of calomel, followed by salines, will pave the way for the various diuretics, including digitalis and water. Too much stress cannot be laid upon this point, and it were better if all suspicious cases, after middle life, received prophylactic treatment along this line. Hardly less important is the bearing of the functional activity of these organs on the question of general anesthesia, particularly as to the agent employed. Whilst chloroform may kill on the table, ether too often follows its victims for a day or two after, who then die from suppression of urine and uremic poisoning.

After providing efficient means to prevent loss of blood during the coming operation, to guard against and overcome shock will claim equal prominence. Besides the measures before alluded to — heat, stimulants, digitalin, strychnine, nitroglycerin, saline injections, transfusions, etc.—often a sheet-anchor of safety lies in a previous hypodermic of morphine and atropine, which soothes whilst it sustains the system, and prolongs anesthesia with a minimum quantity of the anesthetic.

To leave a patient to his fate after operation is unwise. Vigilant oversight until the danger-point is passed will often reap its own reward, and if it is judicious to put the system into proper shape to undergo an operation, and to sustain it during the latter, it is equally or nearly as needful to look after the patient's interests subsequently and carry out a logical after-treatment. Rest and quietude of mind and body are all important. Should shock, anemia, or prostration continue or follow, the same supporting measures, with elevation of the foot of the bed, will be indicated. The functional activity of all the organs must be maintained as soon as reaction is well established, especially the all-important ones of elimination through the various emunctories. We may even hope in this way to rid the system of toxic conditions antedating operation, and induced by disease for which interference was required, and with good prospect of success, seeing that the cause no longer exists. After being kept well warmed for the immediate present, an agreeable or suitable temperature should thereafter be maintained, as nearly as circumstances permit, and in hot weather frequent sponging, with ventilation. The bowels should receive more

attention in the way of laxatives than is usual, and intestinal paralysis with all its distressing features of tympanites, constipation, dyspnea, and prostration may often be forestalled by early doses of calomel, salts, and enemata.

It is needless to add how much more uneventful will be the road to recovery, and how much more comfortable, when a proper dietary for the case in hand is enforced for a while at least. No food whatever should be allowed for a time, and when vomiting and nausea are prominent and continuous, sometimes predigested milk should be given per rectum. These distressing symptoms often tax the resources of art to overcome. Circumstances modify treatment, but if vomiting continues, in spite of withholding fluids and food, there remain at command, as may best suit the individual case, ice, hot drinks, aerated water, champagne, sinapisms, or even in desperate cases cocaine, hypodermics of morphine and atropine, or washing out the stomach. Quite often small doses of calomel and effervescent salines, pushed to free purgation, will put an end to this condition, from which time onward the stomach will tolerate small quantities of light nourishment.

Special indications with various modifications of the above and other measures will, of course, follow particular operations, and it is impossible to trace hard and fast lines bounding all cases. The essential fact aimed at in this connection is to enforce the necessity of watchful supervision on the part of the operator, and a readiness to meet the indications as they arise. Above all it is prudent to pay serious attention to the kidneys and urine, and to seek diligently to discover if any existing symptoms be due to toxemia from insufficient secretion, which is to be promptly relieved by purgatives, diuretics, cupping, water by mouth, or enemata, or, perhaps, by normal salt solution, intravenously or subcutaneously administered.

This article applies, and these principles pertain, to the general practitioner as much as to the surgeon, for the latter too often first sees the patient at a hard time to operate, with little or no opportunity for preparation. Whenever the attending medical man decides that the case on hand proves to be or is likely to become a subject of surgical intervention, in addition to making ready by way of preparing the room, water, utensils, etc., suitable for modern methods and proper cleansing of the field of operation, he should put the patient upon the requisite medication for the attainment of the ends which it is the purpose of this paper to enforce.

THE TECHNIQUE GOVERNING THE USE OF HARRIS'S URINE SEPARATOR.*

BY H. F. HARRIS, M.D., PHILADELPHIA.

This instrument, like all others, has its limitations, and cannot be used in all cases. First, the urethra must be of such size as to admit the instrument. It is the same size as a No. 25 catheter, French scale, and should be available in all patients over sixteen or seventeen years who have a normal urethra. Secondly, it cannot be used in certain cases of hypertrophied prostate, either where that organ is bilaterally enlarged so as to interfere with the entrance or opening of the instrument, or where a unilateral projection obliterates or makes impossible the formation of one of the lateral pouches.

The instrument consists simply of a lever, which is introduced into the rectum, and a double catheter. The beak of the lever, when clamped to a fork on the catheter, elevates the base of the bladder in the median line and thus forms two lateral pouches, into each of which empties one of the ureters. The catheter, being introduced and rotated, drains each pouch separately into bottles which have been made partial vacuums. The technique of using the instrument is as follows:

The bladder is first thoroughly irrigated to remove all its contents, and is then cocainized. This is not always necessary, as some individuals do very well without an anesthetic, but as in others the manipulation gives rise to very disagreeable symptoms I use cocaine in all cases as a routine practice. Before using this it is necessary to be sure that no ulceration of the bladder be present. Twelve to fifteen cubic centimeters of a two-per-cent solution is generally employed, this being allowed to remain in the bladder from five to seven minutes. After this 150 to 200 cubic centimeters of warm distilled water is introduced into the bladder, chemicals in this being avoided as they would vitiate the test. The objects of introducing this water are twofold: (1) to permit of the easy opening of the instrument, at the same time giving less pain to the patient; (2) the main reason is to prevent the scraping of any possible pathological elements from the wall of the bladder by having it distended and thus out of reach of the instrument as the beaks are rotated into place in the pouches. To prevent escape of this fluid while the instrument is being placed in position a short rubber tube which kinks and closes its caliber is placed on the straight tips, and one long enough to permit of the opening excursion is placed on the curved ones.

* Clinic at Jefferson Medical College Hospital, Philadelphia.

The patient is placed on a flat table, the shoulders and hips being at the same level, and the knees in an easy lithotomy position. The catheter is first passed, and then the lever introduced into the rectum before the instrument in the bladder has been opened. Great care is taken that both are exactly in the median line, after which they are firmly locked and the catheters rotated into place. After this the water which has been introduced into the bladder is allowed to escape, thus serving other purposes. It demonstrates the patency of the catheters, and cleaning the bladder at this time prevents the collection of mixed urine which may have been secreted during the manipulation of the instrument. The bottles are then attached to the catheters and a moderate vacuum maintained, the urine coming into them drop by drop as it is secreted. The first few cubic centimeters, about four, is discarded, as this is the capacity of the catheters, and that much of the water is retained.

Very frequently there is a temporary suppression of urine after the introduction of the instrument, and a wait of several minutes is necessary before secretion begins. After that it is regular so far as suppression is concerned, but it is secreted at intervals as regards the kidneys—that is, there is alternate activity of the two organs. I have seen one kidney active for fifteen minutes without a drop being obtained from the other, this being followed by a change in the rest and activity. It is important to remember this in order that an erroneous conclusion may not be arrived at by too short an examination. In this way a hasty deduction that only one kidney was physiologically active might be drawn from the unilateral activity.

The rate of secretion is very variable in different individuals. I have left the instrument in place for an hour and obtained only six cubic centimeters of urine; in another case thirty cubic centimeters was obtained in two minutes. It is necessary to accurately time the flow in order to determine the physiological activity of the kidneys. I have worked out a formula for estimating the functional activity, or capacity, of the kidney. There should be .008 cubic centimeter of urine per kilo of body weight per minute of time. This urine should contain two per cent of urea. If the amount of urine collected is divided by the time of collection and the weight and multiplied by the above coefficient, we will have the functional capacity of the kidneys. This remains constant for all cases regardless of the time necessary to obtain the urine (the one in which the thirty cubic centimeters was obtained in so short a time was normal); hence the formula applies to all regardless of the time or amount.

Quite frequently there is irritation of the bladder, and the introduction of any instrument will cause hemorrhage. In these cases I have

found a five-per-cent solution of suprarenal extract very useful, and I always carry it when intending to make an examination. It should be freshly made and filtered through cotton before using, and may remain in the bladder any length of time without causing untoward results.

A small amount of blood in the urine does not interfere with the analysis, provided some of the urine is collected and analyzed before the instrument is used. With the suprarenal extract, however, this can be almost entirely prevented.

PROFESSIONAL CHEERFULNESS.

"I have been thinking to-day of the benefits and blessings of looking always on 'the bright side of things,'" remarked the Successful Practitioner who is also Something of a Philosopher to his friend the Square-minded Business Man, as the latter came into his private office not long ago for another of those informal talks which had now come to be regarded as of interest and value to both. "Though optimism is a splendid and useful quantity, I am nevertheless inclined to place it second in importance to cheerfulness, which I have taken the liberty of defining for myself as *the faculty of working on the bright side of things*. The one implies an attitude, the other a continued expression; satisfaction primarily accrues from the former, but tangible results issue from the latter. What is cheerfulness, and what are its offices? It is a native light of the mind, surrounding with a golden halo all that it shines upon—the spontaneous rhyme and rhythm of one's personality expressing itself in a multitude of different ways. Beneath its influence age forgets the flight of youth; darkness is tempered with light; the harshness of business and professional cares is softened, and the wear and tear of every-day life lessened. There are two ways in which we may view this great drama of life—we may see it through the darkened lenses of melancholy gloom, or through the prismatic hues of happy temperament. There are those who look only upon the somber sides of their vocations. They are brooding more or less of the time over merest phantasies, and in their overwrought imaginations things are constantly happening for the worst. The lives of such are a seldom-ending rain with no sunshine to diffuse its easing and softening influences over their minds and tasks. And then, there are some natures so happily constituted that they find good in everything. No sky is too black to hold a silver ray; no misfortune severe enough to deny some fact or measure of comfort to them. Such temperaments are, indeed, to be envied for their influence upon both themselves and others, for 'an inexhaustible good nature is one of the most precious

gifts of heaven, spreading itself like oil over the troubled sea of thought, and keeping the mind smooth and equable in the roughest weather'" (Irving).

"One is truly and always refreshed by the presence of cheerful people," replied the listener. "The cheery person who has a pleasant smile for all, a genial word for every acquaintance, and a general happy expression for the world at large, is the one whose companionship is sought, whose presence is always desirable, and whose absence is never unfelt. Wherever such a one goes—especially if he be a professional man, particularly if he be a physician—he carries gladness. He puts encouragement into the heart of every one he meets. When you inquire after his health he answers you in a happy, cheerful way, which tends to quicken your own health-pulse. He does not burden you with a list of complaints, nor does he consider it necessary to tell you at the breakfast table how many times he has heard the clock strike during the night, how poorly he rested, nor any other details of his miserable condition between evening and morning. He prefers from cultivated habit to speak of cheerful things, not staining the brightness of the day-dawn for you with a recital of any of his own misgivings or discomforts. The cheerful man carries with him a subtle grace in his presence and personality, an influence which acts upon others as summer warmth upon the fields and forests. It wakes up and calls out the best that is in them; makes them stronger, braver, happier. Such a one makes a little spot in this world a lighter, brighter, more congenial place for other people to live in. To meet him in the morning is to receive inspiration which makes all the day's struggles and tasks seem easier. His hearty handshake puts a thrill of new vigor into your veins. After speaking with him for a few minutes you experience an exhilaration of spirits, a quickening of energy, a renewal of zest and interest in living, and are ready for almost any duty or service. Such examples ought to teach us a salutary lesson, to aim to be always cheerful ourselves, and thus aid others in being so. Gradually, too, we come to discern that one's understanding and power may be gauged more or less accurately by his degree of capability in meeting the conditions and events of life with good nature. And here I would employ a sentiment of Addison to help us guard against mistaking mirth for cheerfulness. The latter is a conscious expression, the former may be a habit of the mind. Mirth is short and transient; cheerfulness fixed and permanent. Those are often raised into the highest transports of mirth who are subject to the severest depressions of melancholy. On the contrary, cheerfulness, though it may not carry to the mind such an exquisite gladness, yet it prevents us from falling into the depths of

sorrow. Mirth is like a flash of lightning that breaks through a gloom of clouds and glitters for a moment. Cheerfulness keeps up a kind of daylight in the soul, filling it with a steady and perpetual serenity."

"The very fact that we value cheerfulness so highly necessarily implies the wide-spread existence of the opposite quality in life," said the Practitioner. "To everything there are two sides—the bright and the dark—like the leaves of a variety of the poplar tree, which on the one side are a dark green, while on the other they are a beautiful white—as Cowper expresses it:

> The Poplar that with silver lines his leaf.

The shell of the pearl mussel, outwardly unattractive, has within the brilliant white layer, often variegated with purple and azure, known as mother of pearl. Thus it is with all life; only in happy instances the bright side comes first. The cheerless are to my observation usually either constitutionally, wilfully, or conscientiously thus. They may have been born of unhappy and unhealthy parents, possibly inheriting disease, and with it some species or other of unhappiness. Nothing has a greater tendency to cast gloom over the spirit than disease, for the mind sympathizes with the body as much as the body with the mind. Their subtle union is so intimate, so delicate, so sensitive, that whatever affects the one necessarily affects the other—each to a certain extent determining the other's condition. If the mind is joyful, its emotion is betrayed by the expression of the body; but if the body be injured, or the physical economy deranged, the mind at once suffers and perhaps droops to sadness. It therefore becomes the duty of one in health to study the laws of physical being, to compel himself both to labor and to rest, to avoid unnecessary hazards, to abstain from injurious indulgences, to be prudent, chaste, and temperate, by every means seeking to preserve that which is so essential to health and comfort. If he has lost this boon of nature, he should strive earnestly to regain it. He should think not, speak not, all the while about his malady. Moans and complaints are always disagreeable to others, and they are never beneficial to the sufferer. It is better to count mercies than miseries—to try upon the body the stimulus of a cheerful spirit—for 'a merry heart doeth good like a medicine, but a broken spirit drieth the bones.'

"Others inherit ascetic and gloomy dispositions. Perhaps nothing has appeared favorable or inspiring to them from the first hour of their conscious existence; as well look for the Ethiopian to change his skin as for such ones to become cheerful and rejoicing in temperament. It is doubtful if even these are, however, excused from all

responsibility for making the worst of everything. Some, too, are determinately cheerless without any primal, tangible cause, perhaps imagining that they were foreordained unlucky. An inauspicious omen hailed their birth; their own touch blighted all their possessions. If they appoint a certain day for a particular thing, some obstacle is sure to happen in the way; their affection and confidence is always repulsed, half met, or betrayed. They have weighed all things and found them wanting — everything is a hollow sham! They look upon the world as on a morning after a heavy rain before the sun comes out, and see it saturated with tears and streaked by crime. Others are conscientiously wretched. They hold that it is exceedingly dangerous to laugh, not only to the vital functions, but also to the moral responsibilities. The association of the idea of sin with free and hearty cheer and enjoyment has not fully passed. Many countenances betoken such sentiments — woeful, hope-begone, and life-weary they are, standing in the highways and byways of the world as animated milestones reminding others of the distance to the tomb. Wherever they go they carry a hush and shudder. At sight of them children instinctively stop their gayest sports and edge away; even dogs run from them with scared eyes and lopped tails, as if ice-water had been dashed upon their backs. Grown people generally avoid their contact and pass by on the other side if they can. Some cheerless ones, it is true, hardly deserve to be classed with any I have mentioned, for their hearts are heavy by reason of real sorrows. They have found so much tempting-looking fruit from the tree of life to be only apples of Sodom, bitter and worm-eaten—and they do not know how to be happy and true to their own experiences. Occasionally they make prodigious efforts to be truly cheerful, but their best efforts are wan and look much like smiling faces in daguerreotype pictures—put on for the occasion rather than lifelike and inspiring."

"I have been interested to look into this subject from the standpoint of an employer," answered the Square-minded Business Man, "and have attempted to analyze such instances of wretchedness as have come within the range of my personal observation. Idleness I hold to be the source of much ill-ease of life. Active employment is essential to our mental and spiritual as well as our physical being and it is only when we are engaged in some useful task—calling into reasonable activity one or more faculties—that we have any right to expect health or happiness. 'An idle body is death's easiest prey,' and 'an idle brain is the devil's workshop.' 'They that do nothing,' says Mason, 'are in the ready way to do worse than nothing; it was not for nothing that we have been called into this life.' To my mind, if one has nothing to do for himself, he should do something for

others, for when idleness ceases cheerfulness is apt to appear. The absence of the latter quality is often owing also to the neglect of duty, in which case the spirit, unless hardened, is soon prostrated under the severe scourgings of conscience. Again, a man may fulfil one duty and at the same time slight another and more important one. He may act after the manner of the Pharisees who paid 'tithe of mint and anise and cummin,' while they omitted 'the weightier matters of the law—judgment, mercy, and faith.' The moral effect in this case will be as depressing as in the other. Conscious of his fault, one inevitably manifests his feeling by moody silence or querulous speech. The rule for guidance in instances of this nature is plain—learn your whole duty and perform it well—remembering that 'the only failure in life is the failure to be true to the best one knows'—and a life of good cheer has ample foundations.

"When envy pushes out contentment, cheerfulness goes with it. It is human nature to complain and feel discontent when we see others living in more commodious and elegant dwellings, better clad, or occupying a more exalted position than ourselves. But if we were to reflect that for every one above us there are hundreds beneath us in these respects, we would have less occasion for sighs of regret and more for rejoicing. Memory may often cause dejection, for it is apt to remind us of neglected duties and unimproved privileges, of open and hidden shortcomings, mistakes and disappointments, trials and temptations, disputes and enmities, of sufferings and losses. We sometimes grow cheerless when looking at such a gloomy panorama of our lives. But if we revert to our past enjoyments and successes, to the good that we have been instrumental in doing, to the wisdom we have gained in the strict school of misfortune—in a word, if we were to look more upon the cheerful side of our experiences and less on the dark—we would soon rise, and more or less completely, out of our despondencies. Forebodings of evil, too, rob the mind of cheerfulness. 'Ills that never happen have mostly made men wretched,' says Tupper. Casting glances ahead we see lions in the way, difficulties which we are sure we can never overcome, burdens under whose weight we shall be utterly crushed. And then, not satisfied with our present troubles, we often borrow misery from the future."

"If a philosopher thoroughly acquainted with life, the world, and human nature were to be asked what two most precious gifts could be bestowed upon any professional or business man, I think he might unhesitatingly reply, 'Character and cheerfulness,'" concluded the Practitioner. "With the help of the one so-called fate may be conquered; by the aid of the other happiness is assured. Genius is usually regarded as the supreme mental gift, and in many respects it

doubtless is. But when its disadvantages are reckoned up against its powers, the balance is equal very many times, or even the predominance may be on the other side of the account. Intellect is a splendid possession, but in solid worth, in genuine 'staying power,' and in sound capacity for achievement, character wins the first prize. The leaders of the world's thought and life have been men of character, and when to this quality intellect is added, it is the character which has given to the intellect its leading force and greatest power. Weakness is a source of much more vice in this world than wickedness; it is not so much a relish for depravity as inability to resist temptations that causes the majority of wrong-doings. In the same way weakness of will is at the bottom of more failures in life, in the professions, and in business, than downright incapacity. Men of weak wills cannot successfully overcome reverses and misfortunes. They easily lose heart and cease to struggle when they see success afar off, and when they pause to reckon the trials and exertions they must encounter to attain it. Character is at once the mainspring and the anchor of all endeavor. It inspires with courage to dare and with sense to submit, with fortitude to endure and prudence to guard and hold. Cheerfulness is such a strong, sturdy, and healthful virtue that it is closely allied to character, and makes an excellent 'pair' with the latter. It is a moral sunshine which will keep a personality bright though all its surroundings be dark. Its genial warmth attracts others and scatters much needed light upon many a somber path. The cheerful man is a public benefactor, for he does good to all who are fortunate enough to pass his way. There is something wholesomely infectious in this disposition, and to see the voluntary lighting up of faces at its approach is the best proof of its influence. Good nature is also the best of medicines for one's self, and every business and professional man should bathe in it. 'Grim care, moroseness, anxiety — all this rust of life, ought to be scoured off by the oil of good nature,' says Beecher. It is better than emery; without it one is jarred and tossed, mentally and physically, by every contrary fact and unwelcome condition of life. The cheerful man gets fully twice as much out of life as his cheerless brother, and his better vision enables him to discern opportunities and sight rewards opaque to the eyes of pessimism."

Dr. E. Bretschneider, of St. Petersburg, has been awarded the gold medal of the Russian Geographical Society for his works on China, especially his "History of European Botanical Discoveries in China." He was medical attendant of the Russian embassy at Pekin for seventeen years.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE USES OF SUPRARENAL GLAND EXTRACT.

The functions of the suprarenal gland may be considered to be involved in some obscurity. That these structures bear an important relation to the vitality of the organism is apparent from the experiments of Brown-Sequard, who found that removal of one gland often proved fatal, and that the extirpation of both was rapidly followed by death. Experiments have been continued now for some years, and these go to prove that an extract of the gland is capable of effecting marked changes on the blood-pressure. The intravenous administration of even a fraction of a milligramme will double or treble the blood-pressure. It is generally conceded that this is due to the direct action of the substance on the coats of the arteries, and it is this which has made the extract so valuable as a hemostatic. The active principle of the gland is said to be a substance resembling pyridin.

Two theories have been put forward as to the mode of action of the suprarenal gland. One of these is that the gland forms a substance having a useful function in the human body by applying a secretion which promotes the tonicity of the arteries and the muscular tissue all over the body; the other is that as the effects of the removal of the gland are those of autointoxication, the suprarenal gland must normally act as an antidote or preventive of this toxicity.

The uses of the suprarenal extract are, of course, based upon its physiological effects. In spite of the almost infinitesimal dose needed to produce a recognized effect, the extract is not poisonous. Its action is not cumulative, and it has no direct effect on the nervous system. Nearly all inflamed tissues are said to be benefited by the application of this extract. It has been employed in the ear, throat, larynx, eye, urethra, and in fact upon every mucous membrane. It is not an objectionable hemostatic, like iron. Secondary hemorrhage

follows it but rarely, and though its effects are somewhat transitory, they have the benefit of being exceedingly certain.

A recent writer upon the subject of suprarenal gland gives his conclusions as follows: That the aqueous extract of suprarenal gland, when used locally, is the most powerful astringent and hemostatic known; that congestion of every organ to which it can be applied is relieved by the external use of the extract; that it benefits all forms of inflammation in all parts of the body; and that it is the strongest known stimulant of the heart.

A great deal of interest attaches to the wide uses of this remedy. Its success in the treatment of asthma has recently been much exploited. In the treatment of hay-fever it has been, and doubtless will be, regarded as a promising remedy. In the treatment of diseases of the urethra a wide field is offered for its use. The blanching of the tissues which follows its application will aid in the dilatation of strictures. In fact, in any case in which local hyperemia is a prominent symptom, the gland extract can find a place.

The limits of its usefulness in internal medicine have not as yet been defined, but that it is likely to find a permanent place in our materia medica seems an inevitable outcome of its proved value.

EDITORIAL NOTES.

Hygienic Zeal Extraordinary.

The city of North Adams, Massachusetts, seems to be erecting a shrine to Hygeia. The milkmen are complaining because by a new ordinance they are only allowed to sell milk tickets once instead of over and over, as has been the custom in the past. The tickets are supposed to be instrumental in transmitting disease. The books in the free public library are, however, allowed to be circulated from household to household, and it is said the people of North Adams have no objection to receiving dirty paper money from each other. Another health regulation decrees that when a wagon-load of manure is moved, it must be covered with a blanket and tucked in as carefully as a child in bed. No contagion must be imparted to the nostrils of the townsfolk. The manure is, however, spread over the lawn of some city residence and allowed to proceed to an advanced state of putrescence without falling under the ban of any health regulation. It is to be hoped the good people of North Adams in their hygienic zeal will not abjure the weightier matters of the law, and that a good sewage system, a pure water-supply, free antitoxin, and general vaccination will not be forgotten while they devote their attention to the transmission of disease by milk tickets.

The Madness of Hamlet and Macbeth.

This is said to be the difference in the insanity of two well known characters: "Whereas Hamlet is insane, Macbeth is to all intents and purposes mad. Do not cry out upon the paradox, but think for a moment. The deed towards which Hamlet is driven represents itself to his mind as an act of justice, even of imperative duty. His will is in reality bent upon it; he blames himself for his physical and metaphysical hesitancies, as for a shameful infirmity. Macbeth, on the other hand, is literally possessed. He is 'beside himself' from first to last. A mere tool in the hands of the witches, and that fourth and direst witch, his wife, he acts in direct opposition to his real will, the genuine promptings of his nature. His sane self stands by and admonishes him of the madness of his action, but a demon has entered into him and stifles the voice of sanity. He never really expects either happiness or material prosperity to ensue upon his crimes, but staggers from murder to murder in a will-less vertigo." Mr. Archer finally makes the following subtle distinction: "Hamlet cannot screw himself up to doing what he really wants to do—a state of mind to which the sanest of us are subject. Macbeth does in spite of himself what he really wants not to do—'a document in madness.'"

Kill the Rats.

In view of the plague obtaining a firm foothold in the Hawaiian Islands, a bounty of twenty-five cents has been offered there for dead rats. Now that this pestiferous rodent is charged with being a bearer of the plague bacilli, it is to be hoped that a general crusade will be inaugurated against these obnoxious animals, whose abiding places are the foul corners of the earth. The old brown rat and his descendants have become a sturdy race, and a war of extirmination would be a gigantic undertaking. Many centuries ago the first emigrant rats left their home in the East, and now it is, as some one has said, almost impossible to find a land which does not contain "Scotchmen and rats." The rat, however, is a dangerous rascal and should go.

Self-mutilation in the Army.

The pangs of homesickness in really bad cases can hardly be realized. A letter from Lieut.-Col. Woodhull, published in a circular from the headquarters of the Eighth Army Corps in Manila, alludes to the fact that self-inflicted wounds of the hand are becoming so frequent that he suggests all such cases be examined by a board of survey. This fact of self-mutilation is a very significant one. A man must be very tired of his job to resort to it. It suggests a weariness of spirit which is sadder to contemplate than the wanton action itself.

ITEMS AND NOTES.

THERE are still a few cases of plague at Honolulu.

SMALLPOX has broken out among the students at Yale.

THE death-rate in New York City is exceptionally high.

SIR WILLIAM MACCORMAC has returned from the war in the Transvaal.

ACCORDING to Surgeon-General Sternberg, the health conditions in the Philippines are much improved.

THE Sheffield Scientific School at Yale has been closed on account of an epidemic of measles among the students.

DR. A. M. PHELPS, of New York City, has been elected president of the Medical Society of the State of New York.

AN epidemic of typhoid fever is prevailing at Milton, Pa. The epidemic is attributed to the city's water-supply.

THE late Dr. Axtell has been succeeded by Dr. W. N. Beggs as editor and publisher of the *Colorado Medical Journal.*

TWO-THIRDS of the surgeons in the Boer army, according to report, are either Germans or Africanders educated in Germany.

ON March 15 Dr. W. B. Ulrich, of Chester, Pa., celebrated the fifteenth anniversary of his entrance on medical practice.

THE Society of the Russian Physicians in Moscow manages a dispensary in which nearly 27,000 patients were treated in 1899.

A NEW hospital will be built at Harlem, the site to be at Lenox Avenue and One Hundred and Thirty-fifth Street, New York.

PHYSICIANS are in great demand in Brazil. They are well paid, but their life is a hard one, as they often have to ride all day to reach a patient.

A YOUNG man from Barbados was recently detained by the New York emigration office and ordered to return to his home, owing to the fact of his being a leper.

THE fifteenth annual meeting of the Association of the American Physicians will be held in Washington on May 1, 2, and 3, under the presidency of Dr. E. G. Janeway, of New York.

So successful have been the results of the daily medical school inspection in Milwaukee that an ordinance will be passed making provision for it as a permanent city institution.

The Western Ophthalmologic and Otolaryngologic Association held its annual meeting in St. Louis on April 5, 6, and 7, 1900, under the presidency of Dr. W. Scheppegrell, of New Orleans.

Dr. Nitsche has recently published, in the *Revista del Museo de la Plata*, an interesting illustrated study of three prehistoric skulls in the museum—"one perforated, one lesioned, and one trephined."

Bibliographia Medica is the title of a successor to the *Index Medicus*, published in Paris under the direction of Drs. Potain and Bichet and the editorial management of Dr. Marcel Baudouin.

President Patton, of the Princeton University, has denied emphatically the rumor that the Jefferson Medical College of Philadelphia was to be made the medical department of Princeton University.

The New York legislature, through its finance committee, has reported favorably on a bill appropriating $150,000 for the establishment of a State hospital in the Adirondacks for the cure of incipient tuberculosis.

A proclamation has been issued by Governor Stanly, of Kansas, declaring a quarantine which practically prohibits the importation of dairy cattle into that State. This has been done in order to prevent further introduction of tuberculosis into Kansas herds.

Individuals desiring to be considered as candidates for the impending vacancy in the Chair of Surgery in the University of Pennsylvania may send notice of such desire to the Rev. Jesse V. Burk, secretary of the board of trustees, before April 7, 1900.

A short time ago in San Francisco a Chinaman died, and somebody suggested that the cause of his death was the plague. Chinatown was quarantined and kept so for a number of days, until the health authorities ascertained that death was probably not due to the plague.

Signor Florio, a philanthropist of Palermo, according to the *Medical Record*, recently founded a dispensary for diseases of the eye, in which all the poor are treated without cost. But this is done at the expense of the institution and not of the attending ophthalmologists, each of whom receives regular fees for the cases treated at the same rate as if they were cases in private practice.

ACCORDING to the *Medical Record*, a man was recently arrested in Boston on a charge of fraudulent use of the mails, his occupation being that of a "divine healer" by letter. He constituted in himself a faith-cure association which practiced therapy by correspondence. It is stated that he employed forty girls in sorting and writing letters, giving what he called his "absent treatment," charging his distant patients $5 a month. It is alleged that his business has recently brought him in $30,000 a month.

ACCORDING to the *Philadelphia Medical Journal* a lumber-handler in New York City fell down a flight of stairs the other evening, and believing himself to be only slightly injured refused to have surgical attendance, and continued at his work all the next day, though suffering from pains in his head. The next morning he felt too ill to go to work, but it was not till afternoon that he became delirious and was taken to a hospital. The surgeons there declared that his skull was fractured, and that he was in a critical condition.

As an instance, says an exchange, of the anxiety which the plague has caused in Honolulu, recently on a tram-car every man aboard was observed to press his finger-tips hard against the region of his femoral glands—and after doing so "some of them looked scared." In fact, it is said that a great many people in town have sore places on the femoral glands or under the armpits, and it is no wonder, for they press the suspected places several times a day in search of plague signs, bruise the flesh and muscles, consequently have unmistakable twinges of pain there and imagine they have the disease.

A WELL-AUTHENTICATED instance of what would shortly have been a case of live burial is reported from southern Italy. A woman died, or was supposed to have died, as the result of a difficult labor, the fetus being left *in utero*. The body was placed in a coffin, and on the following day, before burial, when a photographer opened the coffin in accordance with the direction of the relatives, the woman was found to have turned over on her side, and close to her was the body of an infant, minus the arms, which had been removed during the obstetric operations. A judicial inquiry was set on foot, and the report concludes in favor of recovery from lethargy and death from suffocation.

ANOTHER "human ostrich" has come to grief, says the *Medical Record*, and a surgeon in Baltimore removed from the man's stomach ninety-one nails, iron and wire, measuring from one to four inches in

length; one pocket-knife, seven knife-blades, one about three-quarters of an inch wide; nine horseshoe nails, four inches long; eight screws, two and one-half inches long; eleven pins, ordinary size; two screw-eyes; forty-nine tacks, some with very large heads; one small staple; twenty-five grains of ground glass; four brass watch-chains, with catches and stays; and twelve and one-half feet of three-eighths-inch iron chain.

THE cost of alcoholic drinks in Great Britain during 1899, says the *Philadelphia Medical Journal*, was £162,163,474, this figure being about £6,000,000 in excess of the total for 1898. An enormous amount of this sum represents the duties upon the alcohol, so that one person can hardly fail to rejoice over the size of the national drink bill—and that is the Chancellor of the Exchequer. And truly, as the South African war bids fair to cost Great Britain, temporarily at any rate, £50,000,000, the national coffers are glad of replenishment this year. Still, without being an expert in political economy, it is easy to see that it is a wasteful proceeding to expect a country to drink itself free from its liabilities incurred by war. It is the same man who drinks and who fights; and if he doesn't drink too much he will fight better, and the war will be over quicker.

THE different nations, says an exchange, have different superstitious practices to be carried out at the time a baby is born. The English wish the baby misfortune, persuaded that fate always accomplishes the opposite of one's wish; the Irish keep off all harm by a belt made of woman's hair; the Scotch put a knife and pincers in the cradle; in Holland they put bread, meat, salt, and garlic in the cradle; in Brittany they pull the child's limbs till they crack, they bathe its head in olive oil, and moisten its lips with brandy; the Roumanians tie a red ribbon about one foot of the newly-born child; the Turks drop water and earth on its forehead; the Greeks, taking the child in their arms, turn, singing, three times before the hearth; and in Spain they stroke the baby's face thrice with a willow branch.

ACCORDING to the *Medical Record*, Signor Ignazio Florio, a wealthy merchant of Palermo, has recently built a sanatorium for consumptives which is said to be a model of sanitary perfection. It is on the shore to the north of Palermo and faces south, Monte Pellegrino protecting it at the back from the north winds. The building is constructed of fire-proof material, with iron and concrete flooring. The corners of the rooms are rounded, there are no moldings and no projecting decorations, and the walls are smooth and painted. The patients' rooms all face the sea, and each has its own bath-room and toilet arrange-

ments. The laundry and disinfecting plant and the chemical and bacteriological laboratories are housed in separate buildings. The drainage system has been constructed with particular care, and excrementitious matter is sterilized before being discharged into the sea. The sanatorium is under the medical direction of Dr. Vincenze Cervello, of Palermo, who has a staff of assistants. The sanatorium is for those who can afford to pay for luxury, but seventy-five per cent of the net profit will be devoted to the maintenance of other sanatoria for the poor.

Professor C. Binz has been making some chemical and physiological observations, and gives an account of his researches in the *Deutsche Aerzte-Zeitung* of January 1. He confirms the statement of all previous experiments that there are three kinds of substances in tobacco smoke, namely, nicotine, the chief alkaloid of tobacco; pyridin, a liquid nitrogenous compound of the benzine series, which is obtained by slow combustion of the tobacco; and carbonic oxide gas. He finds that carbonic oxide gas is always present in tobacco smoke in the proportion of 0.6 to 7.6 per cent of the total volume of the smoke. The variations depend upon the rapidity of combustion and the greater or less abundance of the air mixed with the smoke. He points out that a slight degree of carbonic oxide poisoning must be produced by the smoking of large quantities of tobacco, but whether this has a cumulative and deleterious effect is hard to determine. The carbonic oxide can be detected in the blood by means of the test with tannin in aqueous solution at a temperature of about 40° C., and this test is regarded as better than the spectroscopic test—observation of the bands of carboxyhemoglobin.

NEW PUBLICATIONS.

ORTHOPEDIC SURGERY.

This excellent little manual of orthopedic surgery has been compiled for the purpose of serving as a guide to students taking the course of instruction in orthopedics at Columbia University. It is intended to be an adjunct to personal teaching and clinical observation. It will be found to serve the purposes of the student in an exceedingly apt manner. In the margin have been placed a number of suggestive questions, such as are usually asked in the clinic by the instructor. These will test the student's conception of cause and effect in a manner essential to the mastery of the subject. The more important subjects connected with orthopedics have been commented upon at considerable length. The book is amply illustrated by a number of excellent engravings which very graphically depict the character of the deformities described in the text. The book is fairly entitled to be considered one of the most helpful manuals the student can possess.

Clinical Lessons in Orthopedic Surgery. By Royal Whitman, M.D., Instructor in Orthopedic Surgery at the College of Physicians and Surgeons of Columbia University. Edited by George Alexander Saxe, M.D., and Abraham L. Wolbarst, M.D. New York: James T. Dougherty, 1900.

BRUCE'S PRINCIPLES OF TREATMENT.

The author of this work has already enriched medical literature by his numerous contributions, but nothing more attractive in the literature of therapeutics has been offered for some time than his Principles of Treatment. He endeavors to simplify the art of treatment by reducing it in all cases to its governing principles. After doing this, he presents concrete examples of the application of these principles in describing typical cases of disease. The work possesses high literary value and affords enjoyable reading. The therapeutical injunctions are at all times sound, and the practitioner will derive great help while following his own cases in perusing the descriptions of daily management in similar cases in the book before him. Dr. Bruce's work is an unqualified success.

The Principles of Treatment and Their Application to the Practice of Medicine. By J. Mitchell Bruce, M.D., F.R.C.P., Lecturer on the Practice of Medicine in Charing Cross Hospital, London; Examiner in Medicine, Royal College of Physicians, London. Revised to Conform with the U. S. Pharmacopœia by E. Q. Thornton, M.D., Jefferson Medical College, Philadelphia. In One Octavo Volume of 625 pages. Cloth, $3.75, net.

LEA'S SERIES OF POCKET TEXT-BOOKS.

In the manual of nervous diseases presented by Dr. C. S. Potts, the student is provided with a manual embodying the essentials of the subject. So much is now written on nervous and mental diseases that a book of this size cannot, of course, take the place of more complete text-books, but the student will be able to acquire from this manual a good working knowledge of the subject. When we find that the physiology of neurone has been condensed into a few pages, we can realize that this manual is a very concentrated epitome of neurological science as it prevails to-day. As there are few things in medicine concerning which there is so much ignorance, it is to be hoped that this little manual will be widely appreciated by the general practitioner.

Nervous and Mental Diseases. A Manual for Students and Practitioners. By Charles S. Potts, M.D. Series Edited by Bern B. Gallaudet, M.D. Illustrated with Eighty-eight Engravings. Philadelphia and New York: Lea Brothers & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

What Precautions Shall We Take to Avoid Leaving Foreign Bodies in the Abdomen after Operations?

In order to avoid the leaving of foreign bodies in the abdomen after operations, Dr. H. A. Kelly (*New York Medical Journal*, March 24, 1900) has adopted the following set of rules:

1. In the first place, always commence with a definite number of pieces. He begins his operations, for example, with seven marine sponges and nine pieces of gauze, an ample provision for the average case.

2. Write down upon a slate or a piece of paper the number of pieces of gauze and sponges in use.

3. If more are added, it is the duty of the assistant to instruct the nurse to write them down at once, and to receive from her a statement as to how many she has recorded.

4. Kelly would, with Boldt, urge the entire abandonment of small pieces of gauze and small sponges.

5. Avoid packing pieces of gauze up in the abdomen out of sight.

6. The use of a bit of tape, as recommended by Boldt, attached to the corner of the gauze and left hanging out of the wound with a forceps clasped on the end, makes a safe tracer, although this, too, has failed as an absolute safeguard.

7. If marine sponges are used, they may be enclosed in a loose gauze bag with a tracer similarly attached; sponges held in long forceps do not need a tracer.

8. The operator should put the simple questions, at the close of the operation, How many pieces of gauze are called for? and, How many sponges are called for? These questions should be answered without circumlocution or explanation by the simple direct statement of the numbers wanted. In order to keep his assistants on the alert, and as a means of training them to be extremely careful, Kelly occasionally holds back a sponge or a bit of gauze, and does not give it up until they insist that it is wanting.

9. Never under any circumstances should the count be muddled by cutting the gauze or dividing the sponge.

10. It is his practice to make two people responsible for the number of pieces used, as well as for their production at the end of the operation; these are the assistant, who handles the sponges, and the

nurse. In some clinics, where fewer assistants are used, it will be necessary to place all the responsibility on one head, either nurse or first assistant.

11. The discarded gauze or sponges must always be thrown into a receptacle, and never, under any circumstances, mixed with soiled dressings, towels, or sheets, or, worst of all, carried out of the room during the progress of the operation. Kelly has had made a simple device of wire for the purpose of facilitating the counting of these articles, by which soiled articles collected in a definite place can be counted without handling them.

12. In addition to all the precautions noted the surgeon must always exercise his vigilance in taking an exact note of everything that is put in the abdomen, and it may be of service to memory to state aloud, "One sponge introduced into the abdomen," "Two pieces are now in the abdomen," etc.

13. An examination should be made in all cases to see by actual inspection and by touch that nothing has been left behind. Such an examination will not, of course, be pushed to an extreme unless there is a missing article to be discovered.

Electrolysis as a Means of Curing Chronic Glandular Urethritis.

G. Walker (*Maryland Medical Journal*, March, 1900) advises the use of Kallman's method in the treatment of chronic glandular urethritis. When the patient is ready the sponge electrode is moistened and placed on the perineum or the groin (preferably the latter); the glands are then found by means of the endoscope, and the mucous membrane thoroughly cleansed with a cotton sponge, so that nothing obscures the field of vision. The needle is then carefully introduced through the tube and inserted directly into the orifice of the gland for a distance of one-half to one millimeter. It is then steadily held and the circuit made. In from fifteen to twenty seconds a white froth can be seen exuding upward around the needle. This action is allowed to continue for from thirty seconds to three minutes, when a distinct collection of white foam is apparent. The circuit is then broken and the needle carefully removed.

The electrolyzed area appears as a white spot, due to the accumulation of foam above mentioned. After wiping this off, the place is visible only as a minute, bloodless, punctured wound. Forty seconds is sufficient for one séance.

From three to five glands are usually destroyed at each sitting. There is very little pain, and the use of cocaine is not required. The

destruction of the gland is by the electrolytic action, and not by cauterization. The proper strength of the current should be from four to six milliamperes. This can be most accurately determined by a milliamperemeter, but can be practically obtained by employing a number of cells in series until the desired electrolytic action is obtained.

Following this treatment there is set up a decided urethritis, accompanied by a copious purulent discharge, which lasts for several days, and is best treated by some mild astringent, or by irrigations with boric solution.

The Prophylaxis and Treatment of Gonorrhea by Methylene Blue.

Joseph Alan O'Neill (*Medical Record*, March 24, 1900) says that methylene blue administered internally will cure gonorrhea in from four to seven days. To the diplococcus, which is the specific cause of this disease, it is especially fatal. The pyogenic bacteria that make gonorrhea a mixed infection succumb very promptly to this germicide. It is best given in gelatin capsules in one-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone, it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind. Oil of sandalwood is a desirable adjuvant because of its diuretic action and also on account of its sedative effect upon inflamed mucous membrane.

Methylene blue is a coal-tar product, one of the aniline colors, and like the other derivatives of the series it lowers the blood-pressure, diminishes the sensibility of the sensory nerves, and is therefore an antipyretic and an analgesic.

The writer says that in no case has he found it necessary to continue treatment for more than ten days. He says that he has seen the thick, purulent discharge reduced in twenty-four hours to a thin, colorless mucus.

The Present Status of Antiseptics in Surgery.

Thomas H. Manley (*Merck's Archives*, March, 1900) says: "Let the dressings be ever so baked and boiled and the operator gloved, hooded, and masked, the atmosphere will defy him. What is practiced to-day, and what seems to have come to stay, is modified antisepsis. In the practice of asepsis, antiseptic agents occupy a prominent place, though with distinct limitations. The surgeon's hands, the integuments of the patient, the instruments, are saturated with them, and

the gauze dressings must frequently imbibe them. Antiseptics are not now employed during the operation. They are rigidly restricted in non-infected cases to before and after the operation. Hence the intermediate or operative stage only is, properly speaking, the aseptic. The dry treatment of wounds marks a notable and substantial advance in operative surgery. Operators now seek to render their work as dry as possible through every stage of the operation. Iodoform is still preferred as the most effective dusting powder, although it is only an antiseptic, and, moreover, is prone to toxic absorption."

Accidents in Surgical Anesthesia; Rhythmical Tractions upon the Tongue.

Laborde (Acad. de Méd., Paris, in *Progrès Médical*, Jan. 27, 1900, p. 56) presents an interesting study bearing upon the results of tractions upon the tongue. Intermittent and rhythmical, they stimulate and sustain the suspended breathing reflex. Continuous and persistent traction, however, may cause arrest of the respiratory function.

[This fact may have a bearing upon surgical anesthesia where sustained traction with tongue forceps might tend to abolish the breathing reflex.—Translator's Note.]

Shell-membrane from Egg for Transplantation.

W. Schuller (*Monatsch. f. Unfallh.*, v. 6, No. 9) recommends for such cases in which neither Reverdin's nor Thiersch's methods of skin-grafting are available the use of shell-membrane taken from a fresh hen's egg. This membrane contains epithelial elements which lend themselves most readily to the epithelializing of wounds, and should be applied, albuminous surface down, on the previously cleansed and sponged granulating surface.

MEDICINE.

Progress and Drift in Pathology.

T. Mitchell Prudden (*Medical Record*, March 10, 1900) says that pathology is now progressing out of the stage of development of a science which is marked by the simple accumulation of facts. We are grouping whole series of phenomena as diverse manifestations of the identical forces due to diverse conditions of environment. We are even gaining courage with Schleich to describe disease as a form of the struggle for existence against those injurious influences to which man is not yet adapted. If one were asked to summarize the most

important change in outlook and purpose which has woven itself into pathology during the past half-century, Prudden thinks he might wisely say of disease, as Conn has recently said of animals and plants, that fifty years ago they were objects to be classified: to the student of to-day they are objects to be explained. Of course, medicine has had explanations in plenty which for exhaustiveness and finality left little to be desired; ranging as they have from black bile to Beelzebub. But there is just one fundamental difference in our attitude to day which lends assurance to the hope that we are on the right way at last —that is, we are no longer trying to conduct alone our search for light, but have called in our sister sciences. We have at last linked our conceptions of forces which sustain and sway the human organism with forces which are universal, and when we get conceptions which fit in with the laws of the conservation and transformation of energy, with the doctrines of organic evolution and the formulas of molecular physics, it is, Prudden thinks, a good deal more than an even chance that we are on the right trail.

Typical Tuberculosis Without Koch's Bacilli.

The *Revue Médicale* (Montreal, Feb. 7, 1900, p. 252, note) abstracts from *Proc. Soc.-des Sc. Méd.*, Lyons (France), the following report:

"Cowemont and Tixier relate a case of streptobacillary tuberculosis occurring in man and inoculable to animals. Initial trouble in the human subject took the form of hemorrhagic arthritis. Tubercle bacilli were found neither in the articular fluids nor in the synovial membrane, which nevertheless presented typical tubercular lesions with giant cells. Inoculation to guinea-pigs of the liquid secured within the joint produced an active form of tuberculosis susceptible of serial reinoculation. In none of the lesions, however, was it possible to demonstrate Koch's bacillus. From a tubercle originating in the liver of one of these guinea-pigs a special form of streptobacillus was isolated (bearing no relation whatever to Koch's bacillus), and which readily grows in various media, the glycerinated among them, at temperatures varying from 12° to 37° C., while cultures *in vacuo* hardly bring any returns.

"Inoculation to rabbits or guinea-pigs of from one-fourth to one-half cubic centimeter of this culture induces a rapidly progressing form of tuberculosis involving the lymphatics, sometimes producing local suppuration, and often complicated with hemorrhagic lesions of the serous membranes, the two latter symptoms reminding one of evolution in the human subject. This is one of the first well-established instances in which genuine tuberculosis in man has been

traced to another cause than Koch's bacillus. Similar studies bearing upon what authorities have called pseudotuberculoses (evidently a misnomer, since they are truly tubercular processes possible of serial reinoculation) have almost always borne upon tubercles or bacilli of animal, never of human, origin. The above related case is the first one recording streptobacillary tuberculosis of human origin verified by isolation, culture, and inoculation of the pathogenic germ."

Roentgen Rays and Renal Calculi.

Dr. E. Tschudy, of Zurich (*Lancet*, Feb. 17, 1900), reports an interesting case of nephrolithiasis. The case occurred in a woman, aged thirty years, who had suffered for one year from pyelitis which, as cystoscopic examination proved, affected the right kidney. Nephrotomy was performed in March, 1898; the renal wound was closed by deep sutures after removal of a renal calculus. The patient was dismissed relieved in May, 1898. Recurrent symptoms took the patient to Wildungen in the summer and autumn of 1898, and examination in June, 1898, proved that the urine of the right kidney was normal, but that the left kidney was affected by pyelitis. After several attempts Mr. Wuest, of Aarau, succeeded in producing a Roentgen ray photograph demonstrating the presence of a renal calculus. Nephrotomy was then performed on the left side on June 27 with success, and the patient was dismissed on August 9. She feels well and has no renal symptoms; but microscopic examination of the urine still reveals an irritative process of the kidney.

Roentgen rays promise to aid the surgeon to an early diagnosis in cases of renal calculi, which are very rare in Switzerland.

Calcareous Infiltration of the Skin.

L. Derville, before the Congres de Médecine de Lille, 1899 (*British Medical Journal*, Feb. 3, 1900), recorded his observations made upon this curious condition. The patient was a man, aged thirty-nine, without apparent visceral lesion, but very emaciated and almost cachectic. For the last three years he had noticed the appearance of hard plaques occupying the cutis, and having begun as a small hard swelling, showing slow progressive extension. Although painless in the beginning, these areas became somewhat tender when pressed upon. They were situated in the left cheek (2 by 4 centimeters), the left gluteal region (15 by 5 centimeters), the outer aspect of the left thigh, the anterior portion of the right thigh, and the gluteal region. Under the administration of arsenic and general tonic treatment the patient recovered as regards his general health, but without alteration of the

local condition. Microscopic examination of fragments removed showed that the lesion consisted in cystic degeneration of the sudoriparous glands, with calcification of the contents of the neighboring tissues. So far there is no explanation as to the etiology of this lesion.

A New Test for Bile in the Urine.

Biffi (*British Medical Journal*, March 10, 1900), after trying all the various tests, came to the conclusion that any new test must be based on the precipitation of bile pigments, as of the various methods now in use those based on this gave the most satisfactory results. The author's method is as follows: Take 150 to 200 cubic centimeters of urine, strongly acidify with H_2SO_4, then add drop by drop five-per-cent solution of BaCl (30 drops to every 100 cubic centimeters of urine). Drain off the liquid urine, and pour the soft precipitate on a piece of absorbent wool. Spread the precipitate evenly over the surface of the wool, and place upon it a crystal of bichromate of potash. If bile is present a green ring will appear round the crystal, changing later to blue, and then red. Instead of bichromate of potash a drop of fuming HNO_3 may be used. But this reaction is neither so delicate nor so rapid as the bichromate. A small quantity of albumin does not disturb the reaction. If there is much, the author recommends a saturated solution of Na_2SO_4 instead of H_2SO_4.

THERAPEUTICS.

The Treatment of Hiccough.

J. Noir (*British Medical Journal*, March 10, 1900) refers to the frequency of hiccough as a dangerous and even fatal accompaniment of certain diseases. He looks upon it as a series of convulsive seizures due to toxic causes. Allusion is made to Erb's method of treating it by faradization applied to the epigastrium; to the method of galvanization or faradization of the phrenic nerve; to the method of passing a galvanic stream transversely between the mastoid processes; to Leloir's method of compressing the left phrenic nerve; to Nothnagel's method of forcibly elevating the hyoid bone with the fingers; and particularly to the method of Laborde, of vigorous traction applied to the tongue, an outcome of Lepine's observations on the effect of traction applied to the tongue upon the apparently dead. Noir has had several successes in treating persistent hiccough by Laborde's plan. In one, a very nervous girl of 6½, who had had violent hiccough for

six hours and was so much exhausted that her relatives had given her up for dead, traction on the tongue for about a minute and a half calmed the malady as by magic, and it did not recur. In another case, where the patient was diabetic, tuberculous, and cachectic, the hiccough had been severe for several days, and was evidently toxic in origin. It had resisted all forms of medicinal treatment and absolutely prevented sleep. Traction on the tongue, continued for about two minutes, completely arrested the spasm; it, however, reappeared several days later, but again ceased on the patient practicing the method on himself. The great advantage of the method is its simplicity, and that it does not require any electrical or other apparatus.

Some Points in the Therapeutics of Heart Disease.

W. H. Thompson (*Medical Record*, March 17, 1900) says that in the treatment of all chronic heart diseases every organ of the body which has to do with nutrition must be called upon to do its share to help the laboring heart, and if any of them are out of order they must be set to rights. The writer says that physicians should not forget that all nervine medicines, such as digitalis, strophanthus, nitroglycerin, strychnine, caffeine, sparteine, and the rest, can never be other than temporary makeshifts. All that they can do is to relieve symptoms, and that only for a while. Permanent improvement is to come from other agents and measures which restore nutrition rather than stimulate function. One of these, which the writer holds to be of paramount importance, is fresh air. Fresh air should be systematically and continuously provided without effort on the part of the patient with failing heart. Then the great train of serious symptoms will finally vanish, and that not temporarily, as is too often the case with drugs.

The writer says he never fails to administer iron and keep it up continuously in chronic heart disease. The bichloride of mercury, given in doses of $\frac{1}{24}$ grain three times a day for a week, has long proven efficacious in the treatment of chronic endarteritis. The writer has also prescribed five grains of iodide of sodium three times a day for weeks and months in chronic enlargement of the heart accompanied by arterial disease.

A Substitute for Inunction in Mercurial Treatment.

Blaschko (*Berl. Klin. Woch.*, No. 45, 1899) has used the method first employed by Merget of impregnating the garments of patients needing mercurial treatment with some preparation of mercury.

Welander used a powder consisting of forty per cent of mercury, with zinc and aluminum in amalgam. Blaschko has used a modification of this method for two years among his out-patients with good results. A coarsely woven cloth is impregnated with a salve containing ninety per cent of mercury. The cloth (made by the firm of Beirsdorf in Hamburg) is known as "mercolint." The manipulation is so exact that neither the salve nor the mercury is to be detected. Shirts made from the medicated mercolint are worn by the patients next the skin by night as well as day. In about four weeks their gray color changes to white, when it is concluded that all the mercury has been absorbed. Each shirt contains from ten to fifty grammes (2½ to 12½ drachms) of mercury. After the use of this method mercury appears in the urine, and stomatitis with salivation is produced. Blaschko has found the method of therapeutic value in the different lesions of syphilis. It has marked advantage in obviating the inconveniences of fumigation and inunction, and it is as energetic as the injection method. He recommends it particularly in weakly patients, in those suffering from syphilitic anemia, in gravid women, and for infants.

Orthoform Used for the Purpose of Making Arsenic Paste Painless.

Dr. W. P. Nicholson (*Atlanta Medical Journal*) has used orthoform successfully for the purpose of making an arsenical paste painless when applied as an escharotic in removing the various kinds of growths. He reports the case of a man sixty years of age, who came to him for relief from a growth on the side of his head about the size of a hen's egg, projecting outward. The base of the tumor extended a short distance in front of the ear. The surface was covered with a dry scab, under which blood oozed at the slightest touch. As the tissues seemed very friable, a somewhat novel means of removal was employed. A thread of silkworm-gut was passed around the growth, and by a rapid sawing motion the growth was quickly removed flush with the skin. After controlling the severe bleeding by pressure applied at short intervals, the raw surface was freely sprinkled with powdered orthoform. Then with a powder made of equal parts of arsenous acid and powdered gum acacia, orthoform was mixed without noting the proportions. This was then made into a paste and applied to the cut surface, and the patient given a few tablets of morphine to take when the pain became severe. The next day found the tablets unused, the patient having had no pain since the paste was applied, and the result was perfect, the growth being entirely destroyed.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Operative Treatment of Fibroma of Postnasal Space.

Before the Laryngological Society of London (*Journal of Laryngology*, vol. xv, No. 2) a case was exhibited, a young man of seventeen, in whom there was a tumor of the nasopharynx. It had been causing obstructive symptoms for four years. During the discussion of the case by different members, Mr. Butlin made the following remarks: "The tumor in this case, from its large size and red surface, appears to me to be probably a fibroma, and may probably be removed with safety. I have had considerable experience in the removal of these postnasal tumors, and have long since come to the conclusion that by far the safest and most certain method is to divide the soft palate and the soft parts of the hard palate in the middle line, and cut away the bone of the hard palate until the tumor is thoroughly exposed. I am very much opposed to temporary resection of the upper jaw and other methods practiced through the nose. Nor do I find it necessary to perform tracheotomy. The patient should be laid on his side, with the head forward and low, the mouth well opened with a gag, and the light reflected from a head lamp or mirror. When the surface of the tumor has been thoroughly exposed, and its attachments have been ascertained, it can be freely cut out with scissors, chisel, and bone forceps. The hemorrhage is often very severe in such cases, but it can be arrested by plugging with gauze if it does not cease spontaneously. The removal of the tumor in this manner is not likely to be followed by recurrence of the disease."

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Treatment of Otitis Media.

Dr. H. S. Straight (*Journal of the American Medical Association*, March 24, 1900) in a paper read before the Cleveland Medical Society, on the treatment of otitis media, claims it is impossible in the beginning to tell whether a given case will take the catarrhal or suppurative form. He is not sure that the former ever passes into the suppurative form, but is inclined to believe that, in the absence of

meddlesome treatment, one class of cases is almost certain to end in resolution, while another class, in spite of any treatment, is just as certain to result in suppuration. The individual case must be carefully studied. The one thing absolutely essential in the treatment is rest in bed, and next in importance is the application of heat. The latter will not abort a threatened abscess, but is simply to relieve the pain, which is the chief aim of all treatment. One full dose of opium is useful in the severe pain of the early stage. If after the above measures have been carried out relief does not promptly occur, a paracentesis should at once be done. Drainage being established, the cure results promptly, as a rule. He insisted that the inflamed ear should be kept quiet, and especially that no attempt at inflation should be made.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Modification of Laborde's Method of Resuscitating Asphyxiated Infants.

M. Freudenthal, writing to the *Philadelphia Medical Journal* of March 10, 1900, says that while he has seen gratifying results from this method (Laborde's), he has drawn attention to a modification of the same which he advised some two years ago, and which he considers far superior (see *New York Medical Journal*, Dec. 10, 1898, and *Deutsche Zeitschrift für Chirurgie*, Bd. xxv, p. 608). The salient point in Laborde's method is to produce an irritation of the respiratory center. We know by daily experience how anxiously we try to avoid touching the epiglottis in intralaryngeal operations, even after thorough cocainization. We are afraid of the reflex caused by the least sensation of tickling. Freudenthal has therefore advised in asphyxial conditions to irritate the epiglottis by tickling it. This is very easily done by moving the index-finger to and fro over the epiglottis. The sensitive nerves to be especially considered in this connection are the glossopharyngeal and the superior laryngeal. The glossopharyngeal is distributed to the anterior surface of the epiglottis, while the superior laryngeal—*i.e.*, its inner branch—supplies the posterior surface of the epiglottis, the base of the tongue, and the epiglottidean glands. When, therefore, traction is made on the tongue the epiglottis is subjected to this traction as well, and thus both nerves

mentioned are indirectly irritated. A much more powerful effect, however, is directly exercised upon these nerves by energetic irritation of the epiglottis. Freudenthal therefore considers his method nothing but a modification of Laborde's.

But there are more reasons in favor of Freudenthal's method. He does not consider traction on the tongue as being perfectly free from all danger; at least, he cannot imagine why muscle bundles should not be torn in the manipulations. This is especially to be expected in new-born children and in the excitement which surrounds a confinement in a private house. He has no confinements in his practice, but, *a priori*, one should judge that if any method at all is of value, it should be more applicable to the very young than to the adult. It takes no time to learn it; it takes but a few moments to perform it; it is effective; and there is no danger connected with it. He would, therefore, once more recommend tickling the epiglottis in all cases of deep asphyxia.

Pregnancy and Fibroids.

Walzer (*Centralblatt f. Gynäkologie*, March 3, 1900) reports the following case: A healthy woman, aged thirty-five, presented herself for examination in February. The abdomen was found to contain a hard, smooth, movable growth the size of a man's head, extending to the upper border of the navel. Smaller tumors of similar character were felt just behind the symphysis and to the right. To the left of the large growth, in the small pelvis, was a third tumor of soft elastic consistency, which was taken to be the pregnant uterus. At the beginning of March the patient complained of great difficulty in breathing, and the skin of the face was plainly cyanotic. The tumor was extended upward to the ribs. Hemorrhage soon after appeared, and the abortion of a three months' fetus took place. The placenta was not expelled, and could not be reached either with the finger or curette. The patient was discharged in good condition, and returned for operation in April. Supravaginal amputation with retroperitoneal treatment of the stump was done, and the patient made a good recovery. The uterus was found to contain numerous large and small fibroids, and a small intimately adherent placenta. Microscopical examination of the latter showed complete degeneration and obliteration of the chorionic vessels. According to the author, the case is interesting as illustrating that fibroids are not of themselves a cause of sterility, on account of the length of time which the placenta remained *in utero* without causing disturbance, and as indicating the desirability of induced abortion in certain cases.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

The Etiology and Pathology of Major Epilepsy.

W. House (*Philadelphia Medical Journal*, March 25, 1900), from observation of over 200 epileptics, and from analysis of the recent literature of the subject, draws the following conclusions:

1. We have no record of pathologic findings which logically explain the symptoms of epilepsy.

2. An increase of cerebrospinal fluid would readily account for the seizures. In many instances it is analogous to the marked increase of fluid in the crania of alcoholics and paretics, and is not dissimilar in clinical effects to the more localized lesions of hemorrhage or abscess.

3. This fluid, physiologically subject to more or less variation in quantity from day to day, is fully capable of pathologic increase, and from analogy must bear exciting relation to the convulsion.

4. Its increase is probably gradual, and to this we may ascribe the auræ.

5. Its absorption probably begins with the third stage of the convulsion (relaxation and coma), and if this fails, repeated convulsions (status epilepticus) ensue.

6. Its superabundance may be due to lymphatic spasm, or to marked disturbance of equilibrium between lymphatic and general circulatory activity, which may be favored by heredity, toxemia, or any of the recognized predisposing causes.

In conclusion, the writer states that this creed applies to the so-called idiopathic epilepsy, as distinguished from the convulsion of Jacksonian epilepsy, in which there is a local cerebral lesion, although even in such cases the condition which he has endeavored to describe will help to explain many otherwise unexplainable symptoms.

Importance of Early Diagnosis in Locomotor Ataxia.

W. B. Pritchard (*New York Medical Journal*, July 22, 1899) discusses this subject with especial reference to the newer pathology, reviewing the former and long-held views, which he holds to have been erroneous and in need of revision because of the later light shed by the advances in recent neuropathology and histology.

The integrity of the neurone as the unit is asserted and its inde-

pendence emphasized. The neurones here chiefly concerned are those of the posterior spinal ganglia and the homologous ganglia of the sensory cranial nerves. Of special importance are the facts: (*a*) that these neurone bodies are almost certainly trophic centers for both dorsal and peripheral roots, and (*b*) that these posterior spinal ganglia are peculiarly vulnerable to disease because of the somewhat precarious blood-supply and an exposed state of the dorsal roots from a relative poverty in myelin; (*c*) that the early clinical picture is one of sensory and neurotrophic disturbance; (*d*) that syphilis exerts its malignant influence through impaired nutrition. These and other facts are deemed of special significance.

States of unusual and excessive fatigue, conditions of chronic quick fatigue, especially with antecedent specific history, defects in tactile, pain, and muscular sense—these should be early noted to be appreciated at their true significance, as their prompt treatment alone, before secondary sclerosis has occurred, may arrest or even actually cure the disease. This is the hope held out by the newer pathology.

Traumatisms of the Central Nervous System.

J. T. Eskridge, in the *Journal of the American Medical Association* of March 10, 1900, writes of some points in diagnosis of these injuries, real and alleged, citing cases where in reality the existing disease had by several years antedated the injury.

If organic disease can be excluded, we have to deal with either a neurasthenic or hysterical condition, nor must it be forgotten that either condition may coexist with an organic lesion.

Neurasthenia may be either traumatic or non-traumatic, and may so closely approach the border-line of hysteria as to make diagnosis difficult. In the non-traumatic cases pain is most common over the upper spine and at the base of the brain. In the traumatic forms a lumbago is the more frequent spinal condition. Exhaustion, self-consciousness, and introspection, irritability and emotional disturbances, insomnia, spinal pain and tenderness, hyperesthesia and paresthesia, narrowing of the visual fields, are all attendants of the neurasthenic state. In hysteria of traumatic origin, the pain is largely determined by the site of injury and its nature. To the symptoms of neurasthenia already enumerated we may add hemianesthesia, spots of anesthesia, various tender points, varied and varying forms of paralysis, contraction, crossed amblyopia, contracted visual fields, etc., and we shall have the cardinal points of hysteria.

In hysteria, exaggeration is frequent and impressionability greatly increased.

THE MEDICAL AGE

VOL. XVIII. DETROIT, APRIL 25, 1900. No. 8.

ORIGINAL CONTRIBUTIONS.

TRICUSPID REGURGITATION.

BY W. C. HUNTINGTON, HOWELL, MICH.

My object in writing this article is to draw out a discussion along a line on which my experience is at variance with the teachings of all the authorities that I have ever consulted.

It is very generally taught in our text-books that tricuspid insufficiency is more rare than any of the lesions of the left side of the heart, that when it occurs it is almost invariably secondary to lesions of left side of heart or of lungs, and that it tends more rapidly than the others to dropsy and death. It is also taught that there is normally regurgitation at the tricuspid valve.

Experience teaches me that whenever a tricuspid murmur occurs the valve is impaired and produces abnormal results, that primary tricuspid regurgitation occurs far more frequently than all other heart lesions combined, and that while uncomplicated by disease of left heart or kidneys it does not tend to dropsy but to a directly opposite dry-meated condition.

During four years (1889–1893) that I served on a pension examining board we recognized very few cases of tricuspid murmur, and one or two of these had been previously diagnosed as mitral insufficiency. At that time we did not examine the heart except when heart disease or rheumatism was claimed, or some symptom directed attention to the heart; but under the present administration we are required to examine the heart in all cases and give a complete description of it, whether normal or abnormal. Under this requirement our board has found a very large number of tricuspid regurgitant murmurs accompanied by conditions more or less abnormal.

As mitral regurgitation causes pulmonary engorgement with result-

ing dyspnea directing attention to the chest, so tricuspid regurgitation causes portal engorgement with symptoms directing attention to the abdomen and away from the primary cause of disorder; and so primary tricuspid insufficiency seldom secures recognition.

Since failure of the right side of the heart must be compensated in part by increased power of the left side, the resulting increased arterial tension promotes renal activity and drains the system of its fluids to an abnormal degree, rendering the other secretions less fluid than normal, and this, in addition to the fact that the engorged vessels of the intestines somewhat antagonize their muscular action, causes constipation; and constipation and engorged portal vessels cause hemorrhoids. In addition to this, abnormal consistency of the secretions with faulty intestinal digestion and the constantly loaded condition of the whole absorbent system cause impaired assimilation and resulting malnutrition. The first thing noticeable in such a case is underweight, even more than is apparent. Upon stripping there is evident lack of cellular tissue. The muscles are very clearly outlined and the veins are very distinct. The brachial artery can usually be seen in its lower portion when the arm is bent, and often the radial and temporal also, all of which are somewhat tortuous. The heart's impulse is visible at the xiphoid appendix and in the fifth space, a trifle to right of normal. The impulse may appear in both places at once or in each alternately, rising and falling with the movements of the diaphragm. While this is called enlargement to right, it is really displacement to right and downward equal to, or a little exceeding, the general enlargement of the heart, and is caused by a slight straightening of the arch of the aorta due to increased aortic tension and diminished pulmonary tension, just as the displacement of the apex outward and backward and slightly upward in mitral insufficiency is caused in part by increased curvature of the aortic arch due to diminished aortic tension and increased pulmonary tension. This displacement to the right in tricuspid insufficiency easily leads to error in diagnosis, as it keeps the apex within the normal limit and carries the tricuspid valve so far to the right that its sounds are liable to escape detection.

The above described displacement constitutes about the limit to which the heart can ordinarily go in that direction, and hence subsequent enlargement causes it to extend to left and downward along the sixth space, and this leads to another source of possible error, for now the tricuspid sounds are transmitted so far to left that they may easily be mistaken for mitral or for both.

As the apex extends to the left the epigastric pulsation either disappears or becomes more diffuse.

When the displacement to right is greatest, the murmur is heard

beneath and at both sides of the lower portion of the sternum, and consists of a more or less distinct rasping quality of the tricuspid systolic sound.

As the lesion increases the murmur usually grows softer and lower in pitch; when dilatation occurs it may disappear entirely, and thus produce another source of liability to error. As a tricuspid patient seldom applies for treatment of heart trouble until this stage is reached, or perhaps until mitral regurgitation is superadded, the opportunities for confusion from clinical experience are apparent.

The following rule will probably hold good as between these two valves: If the apex is high, it is wholly or predominatingly mitral; if low, it is wholly or predominatingly tricuspid. If the venous valves become incompetent we have venous pulsation. If the mitral valve also fails, vascular tension is lost and dropsy eventually supervenes.

There is usually no irregularity of pulse in these cases to direct attention to the heart, but its rhythm is in some cases modified synchronously with the respiratory movements, due to the assistance rendered to the right side of the heart by the pumping action of the respirations upon the circulation.

The pulse is usually a trifle rapid and thready, but is very little affected by standing or even moderately active exercise. Indeed, the pulse is sometimes slower when standing than while sitting, owing to the fact that the action of the muscles upon the veins assists the right side of the heart in its work.

The respiration corresponds with the pulse, and there is generally no complaint of dyspnea, but close questioning will usually disclose that he is "short-winded" on severe or prolonged exertion, especially if it involves the arms or chest, as in sawing or rowing.

The dyspnea of heart disease is characteristic. If it is mitral it is due to pulmonary hyperemia, and in the late part of its course is aggravated by lying down; but when it occurs in advanced uncomplicated tricuspid failure, it is due to pulmonary anemia and may be more or less relieved by lying down. Climbing stairs does not affect tricuspid dyspnea any more than any other equal exertion.

The abdominal percussion resonance is generally tympanitic, the epigastrium tender, and the liver sometimes enlarged.

The appetite is liable to be capricious, but averages fair. Enough food is consumed to produce good nutrition. The bowels are usually more or less constipated.

Such people drink very little, because the constantly loaded absorbents do not call for more. If more is drank than the appetite demands, the result is increased urinary secretion with augmented

elimination. Digitalis has the same effect and is not adapted to uncomplicated tricuspid regurgitation.

I have never seen any evidence that tricuspid impairment resulted from acute rheumatism. It is known to be caused by lesions of left side of heart and of lungs, but since the etiology of emphysema is sometimes very obscure, it may not be unreasonable to suppose that it may sometimes be a result as well as a cause of tricuspid failure.

Compensation for tricuspid failure must be largely by the forces which carry on the return circulation. One of these is the hydrostatic action of respiration, and if, by severe labor or exercise, compensating respiratory development becomes excessive, we have permanent dilatation of air cells. Emphysema once established tends to increase the heart difficulty, and *vice versa;* and so it is almost necessarily progressive.

The state of nutrition is better in those cases in which the cause is apparent and recent than in those in which it is not. What are the probable causes in those cases in which they are not apparent? I believe them to be very generally the vicissitudes of childhood, such as whooping-cough, measles, pneumonia, la grippe, frequent attacks of acute bronchitis, and it seems not improbable that the crying and screaming of some children might be sufficient to cause it.

It is well known that children often have heart murmurs, and it is said that these murmurs disappear as the children grow older. It may be fairly questioned whether they disappear by complete recovery or whether it is by change of position, as the heart moves to right normally in childhood, and even abnormally in these cases, so that they are not recognized where first found. I believe that many of the transient murmurs reported are permanent tricuspids transmitted to different distances under varying circumstances. Incomplete recovery in such cases would affect the subsequent nutrition and habit of the individual through life.

I recently amputated an arm for a young man seventeen years of age, of delicate appearance, and a poor state of nutrition. There was excessive capillary oozing of dark, poorly oxygenated blood. On examination I was not surprised to find a very pronounced tricuspid murmur. On inquiring whether he had ever had whooping-cough, the reply was that he had it very hard when a child, and had been subject to frequent attacks of acute bronchitis ever since.

I have under observation the case of a physician fifty years of age, on whom I found a tricuspid murmur with epigastric pulsation four years ago. The case remains unchanged, and although he is muscular and strong, there has been the same lack of adipose tissue and shortness of breath on severe or active exercise of arms and shoulders ever since childhood.

Another physician eighty-three years of age has had moderate chronic rheumatism for about forty years, and during the same time he has had frequent attacks of intermittent pulse with a crowded feeling at the heart. Whenever the heart symptoms appeared all other rheumatic symptoms would disappear, but would return at some other point as soon as the heart was relieved. I first examined his heart about one year and a half ago. The apex pulse is in the sixth space to the left of the mammary line. There is a distinct blowing murmur heard plainly over the entire right side of the heart from base to apex. This might easily be mistaken for a mitral murmur, but is unquestionably tricuspid. There is very great varicosity of entire right internal saphenous vein, and also of the left one from the knee down, but there is no edema. There has been no dyspnea until within two months; it is now constant when he is not lying down, but is not increased by moderate exercise or even climbing stairs. Immediately after lying down it is increased for a few moments, and then entirely relieved so long as he remains recumbent. The valvular defect seems to have resulted from the rheumatism in this case, but a slight contracture of the left palmar fascia is the only other deformity. The degree of enlargement, taken with the moderate habits of the individual, indicates that the valvular defect has been of very long standing.

I have had a case under treatment for the past four years. He is seventy-seven years of age, and has always been very thin in flesh. He first noticed heart disturbance twelve years ago, while running to catch a train. There is incompetence of both propelling valves. His pulse is so irregular that at times it cannot be accurately counted. At such times the respiratory movements are as distinctly recognizable in the pulse as the heart pulsations. He has occasional short periods of prostration with edema of feet and limbs, but is easily relieved by suitable treatment. He has never had rheumatism, and I believe that the mitral trouble is in this case secondary to the tricuspid.

I recently had a patient who had three distinct regurgitant murmurs—aortic, mitral, and tricuspid. The lesions probably occurred in the above order. She got along without serious difficulty so long as the left heart was reenforced by a competent hypertrophied right, but when the latter failed arterial tension was lost and dropsy supervened, which could not be controlled except for a few months.

Why does the human family differ so greatly from the rest of animate creation? Practically all other animals will fatten if liberally fed under favorable circumstances, but there is a considerable portion of the human race who cannot be made fleshy under any

circumstances. I have recognized many such as having tricuspid insufficiency. While such people are never entirely well, they are seldom very ill and may live to extreme old age. Their maladies are mostly subacute and chronic, though they may suffer from myalgia, neuralgia, melancholia, and neurasthenia.

When primary, the tricuspid impairment has much less tendency to increase than that of the mitral valve. The disinclination to severe muscular exercise is salutary, and all muscular effort which does not interfere with respiration directly assists the right side of the heart in its work, while all muscular effort, except respiration, antagonizes the left heart while calling on it for increased performance.

Although the action of the tricuspid valve is more complicated than that of the mitral it is less powerful, and divides responsibility with so many other factors that it is easily compensated.

While severe and prolonged muscular effort is injurious, especially if it interferes with respiration, tending to increase the heart trouble, dilate the veins, and perhaps cause emphysema of lungs, all moderate muscular exercise which does not interfere with respiration is beneficial, and a sedentary occupation is harmful, inducing venous stasis, especially portal, constipation, and impaired oxygenation.

A moderate cup of coffee in the morning and of tea at noon, both by infusion and not decoction, promote good cheer and vascular activity through the day, and the resulting reaction allows of complete relaxation and rest at night. The best result secured from the coffee, in these cases, however, is in its regulating effect upon the bowels. This seems to be largely due to its effect on the circulation and muscular coat of the bowels, as it does not seem to possess any cathartic principle sufficiently active to produce such an effect. The amount taken should never be enough to cause any tremulousness, nervousness, or digestion disorder.

Such people are especially susceptible to the effect of these stimulants, and they are harmful if taken late in the day and especially in the evening, as they induce wakefulness and activity of circulation when there should be rest and recuperation from complete relaxation.

The heavy breathing of deep sleep with the air-passages partly obstructed by relaxation increases the hydrostatic effect of respiration on the circulation, and thus largely relieves the heart of its burden during sleep; hence we see that complete heart rest can only occur as a result of deep slumber. This effect is so pronounced in the deep slumber of childhood that the respirations can be frequently recognized in the pulse. Might not this principle be usefully extended in the case of dilated heart by a suitable application and adjustment of the pneumatic cabinet?

Regarding the question whether there is normally regurgitation at the tricuspid valve, it seems temerity to question the authority of some who take such ground, and who, in doing so, claim that it is necessary to prevent injury from excessive effort of right heart; but a study of the function of the columnæ carneæ seems to show that this valve has an automatic safety action and does not depend upon a defect for its salvation. While I confess to never having seen the function of these bodies explained, a close study makes it seem too obvious to allow of a difference of opinion. The fact that these columns are muscular implies that they contract and relax; their position is such that the direction of their action is opposed to that of the ventricle, and thus, like the compensating pendulum, they adjust the lengths of the chordæ tendineæ, and under normal conditions secure perfect working of the valve. As these columns are composed of the inner ends of the longitudinal fibers of the ventricle, their action probably corresponds in time and power to the action of those fibers, and when the ventricle contracts powerfully the columns contract powerfully also. As the valve is reenforced by the pressure in the auricle, the tension to which it is ever subjected is only equal to the difference between that in the auricle and ventricle.

In nearly all cases where the ventricle is compelled to act with increased power the pressure within the auricle is correspondingly increased and becomes more continuous, consequently the strain upon the valve would not increase in proportion to the increased contraction of the columns, and hence before the danger-point would be reached the segments would be retracted and the valve thrown out of commission, the action being very similar to that of the governor of a windmill; but when there is obstruction to the pulmonary circulation from lesions of lungs or of left heart, the tension within the ventricle is increased more than in the auricle, and in these cases the valve eventually yields.

THE TREATMENT OF VENEREAL ULCERS.

BY N. E. ARONSTAM, M.D., PH.G.,

Clinical Assistant of Dermatology and Venereal Diseases, Michigan College of Medicine and Surgery, Detroit, Mich.

The treatment of venereal ulcer in its incipiency is much more important than in its maturity, and after its extension into the deeper tissues. In fact, the latter, as well as the phagedenic or serpiginous forms, can be conveniently prevented by observing the first principles.

In the first place, individuals suffering from venereal ulcers should be put upon a strict dietary regimen, with total abstinence from alcohol in any form. The diet should be light, nutritious, and easily digested. Tobacco is a source of irritation, and should be prohibited. Direct the patient to abstain from coitus and sleep on a hard mattress, but lightly covered. The patient must be kept as quiet as possible, with the genitalia enveloped by a suspensory bandage.

There are but two general therapeutic indications in connection with the treatment of the ulcer proper, viz.:

1. Cleanliness.
2. Cauterization.

The first consists in keeping the sore absolutely clean, free from all irritating discharges, and separated from the healthy tissues. This can be accomplished by the various antiseptics, the names of which are legion. The majority of them are worthless, some deserve but a passing consideration, while others—and these are numbered—are the *ne plus ultra* among them. To the latter belongs the medicinal H_2O_2. Hydrozone is the remedy I mostly rely on. The ulcer and surrounding inflamed area should be thoroughly washed at first with a hot boric acid solution, one drachm to the pint, followed by the application of hydrozone in full strength or diluted, according to the case, by means of absorbent cotton wrapped on an applicator; this should be repeated every day. It is a valuable oxidizing and antipuritic agent; its effect is almost immediate; the ulcer loses its purulence and leaves behind a clean, smooth floor.

I have obtained wonderful results with hydrozone thus applied. Out of forty-three cases treated as above described, thirty healed completely, seven were indifferent and had to be finally cauterized, while the remaining six were serpiginous and only yielded after a dorsal incision or circumcision, with the subsequent application of hydrozone. The antiseptic treatment is only applicable in cases where the ulcerative process is not extensive. Phagedenism may and can be avoided by the judicious treatment of the ulcer in its incipiency. All the dressings used upon or about the sore must be destroyed immediately after removal and the patient cautioned to scrupulously clean his hands, after the dressings are completed, otherwise inoculation of other mucous surfaces might ensue.

Cauterization. — This should only be practiced when positively indicated. As a general rule it is unnecessary and even harmful, provided the ulcer can be kept surgically clean in the manner described above. A venereal ulcer should never be allowed to extend and become serpiginous or phagedenic. The latter, however, occurs not infrequently in cases where the antiseptic treatment has not been

strictly adhered to, or when the patient presents himself for treatment late in the ulcerative process. In such cases, where in spite of cleanliness and proper local treatment it extends and threatens to destroy the neighboring tissues, we are compelled to resort to more energetic measures.

Cauterization is accomplished in the following manner: The ulcer is washed with a hot solution of boric acid, dried by means of absorbent gauze, and touched with cotton saturated with pure hydrozone. The pledget of cotton and the wooden applicator should be destroyed immediately after. It is imperative to apply it not only to the base, but also to the undermined walls and margins of the ulcer. This should be repeated at least every second day. The patient is directed to remain quiet in the recumbent posture for some time after. In the meantime the penis should be bathed in hot hydrozone solution (one ounce of hydrozone to a pint of water) three times daily, followed by applications of glycozone dressings, which not only dehydrates the inflammatory area, but also checks the suppurative process. In connection with the local treatment the patient's general condition must be enhanced by the administration of iron, quinine, and strychnine, with plenty of nutritious food and fresh air.

It is a bad policy to give opiates in cases of painful ulcers, for we render the already morbid tissues still more vulnerable toward further destruction.

The bowels must be kept freely open by a mild laxative, as saline purgatives are apt to produce urethral irritation.

By far the worst cases to treat are those situated at or within the urethra. They require a special treatment. Before resorting to local applications or injections I begin with an alkaline diuretic, as pot. citrate, acetate, or bicarbonate, in combination with fluid extract of pichi. This renders the urine alkaline and lessens the pain on micturition. The dietary regimen, pointed out above, is equally applicable to this sort of cases. After this treatment has been followed for a day or two I proceed as follows:

The patient having urinated, the prepuce is retracted and the parts washed off with a hot solution of diluted hydrozone. A small soft-rubber catheter, lubricated with cosmoline, is then passed down the urethra beyond the site of the lesion, and a pint of warm water, to which one ounce of hydrozone has been added, is injected by means of an Ultzman hard-rubber hand-syringe or irrigator. In this way the canal is deterged from behind forward, the solution escaping at the meatus urethra, where it is caught in a suitable vessel. Boric acid or iodol is then blown into the urethra and the organ enveloped with sterilized gauze.

A word about the surgical treatment of venereal ulcers. The latter, if situated beneath a tight prepuce, which cannot be retracted, demands surgical interference. Before resorting to this, frequent and copious injections of mild solutions of hydrozone between the prepuce and glans may be tried, as it oftentimes effects a cure.

If the ulcer is persistent, however, then the best plan is to make two lateral incisions through the prepuce and expose the ulcer for local treatment, thus preventing gangrene, with more or less destruction of the glans penis and the surrounding parts. The venereal ulcer is then treated in the manner outlined above. The raw margins of the wound are protected from infection by means of frequent dressings and ablutions with solutions of hydrozone and boric acid. The hemorrhage may be quite profuse, but is readily checked by repeated applications of hydrozone on absorbent lint. After the margins of the flaps have healed, they may be removed by a simple plastic operation.

This is a short summary of the routine treatment I have adopted in treating venereal ulcers; and the results that I have obtained are most gratifying.

THE RELATION OF EYE-STRAIN TO EPILEPSY, INSANITY, AND ALLIED CONDITIONS.*

BY THOMAS P. SATTERWHITE, M.D., LOUISVILLE, KY.

In presenting the subject, "Will eye-strain produce epilepsy, insanity, and other neurotic troubles," I do so with the idea of eliciting a discussion upon this important subject in order to determine if possible whether there should be a competent oculist on the medical staff of each insane hospital in the State.

The views expressed in this paper are largely those of Dr. A. L. Ronney (in his publication on "Eye-strain in Health and Disease"); also of Drs. Boyers, Stephens, and others, who have had considerable experience in this line of work, and who have recorded unquestionable evidence of recovery from various neurotic troubles, embracing epilepsy and insanity, where the patients had been under the care of intelligent physicians, and whose testimony confirms the relief obtained by the adjustment of vision, when medication, rest-cure, travel, and other means had failed.

If it is the opinion of the members of this society that eye-strain may produce neuroses, I desire to ask your assistance in the matter of adding a suitable specialist to the medical staff of the Central Ken-

* Read before the Louisville Clinical Society.

tucky Asylum for the Insane. This innovation, if adopted as part of asylum treatment, I confidently believe will greatly augment the percentage of recoveries.

The following is the present mode of adjusting glasses at the asylum: The patient is allowed to select from the supply of spectacles which may be in stock a pair that comes somewhere near suiting his or her vision; and if there be none in stock which will answer the purpose, has to do without glasses.

It is unnecessary to say that this method is not calculated to be productive in relieving eye-strain, and that it may in many instances increase it; therefore a competent oculist could be of more benefit to the patient, in not a few instances, than the physician or surgeon.

In every institution for the treatment of nervous diseases there should be a competent person to examine the eyes of each patient at the time of admission for treatment, even though the eye may not appear to be the disturbing element. We know that by the system of exclusion we may arrive at the cause of disturbance, and no matter how infinitesimal the number may be in which the trouble is due to eye-strain, if they can be relieved by proper adjustment of vision, most assuredly this means should be employed. We know a great many patients require glasses to see how to employ themselves in various ways. Every thinking man, whether familiar with asylum work or not, knows that diversion for these deplorable people is absolutely essential, and each one who has a vestige of mind left should be enabled to see how to employ himself in some manner.

The literature of medicine goes to prove conclusively that the duration of life is materially shortened by nervous debility and the disease which it entails, therefore any factor in its causation ought not to be overlooked.

If the view that eye-strain is a frequent cause of functional nervous derangements be correct beyond the possibility of a doubt, it is not difficult to foresee that hope of marked relief, or of ultimate recovery, is practically extended to many hopeless sufferers upon whom drugs have exerted little or no benefit.

To illustrate: The lungs do not make us breathe except indirectly, by asking the brain to start the necessary muscles into action. The stomach does not perform its function until after the brain has been requested to turn on the blood-supply in sufficient quantities to produce the requisite amount of gastric juice. The intestine performs its incessant worm-like movements by no inherent power of its own. The heart keeps up its rhythmical beating only when permitted to do so by the great center of nerve force.

Now is it inconsistent with physiological principles to advance the

view that any excess of nervous expenditure to one organ, over the normal amount which should be furnished, is done at the expense of other organs, which in consequence sooner or later must suffer? No one can draw incessantly upon his reserve capital of nerve force without incurring the risk of ultimately exhausting it. A bankruptcy in the reserve capital of nerve force entails untold ills to the individual. The day of reckoning is postponed in any given case in direct proportion to the drafts made upon the reserve and the amount of such reserve. This may help to explain why some escape indefinitely, while others are precipitated into indescribable distress when life is hardly begun.

If the bearing of eye-strain upon the problem of nervous expenditure does not seem quite clear, I will call attention to some facts relating to the more common ocular defects.

We know that some persons are made dizzy by looking from a height or inspecting a waterfall; others suffer pain in the head and are made sick at the stomach by trying on a pair of spectacles which are not adapted to their eyes. Strabismus is often due to some defect in the eye or weakness of its muscles. Perhaps it has never occurred to most persons that sight is the only special sense which we use constantly; fortunately for our nervous system the normal eye takes pictures of surrounding objects without muscular effort when the object is more than twenty feet away, hence the larger part of each day the normal eye is passive and is practically at rest.

I can easily demonstrate that disturbed brain action from eye-strain may in a healthy person produce headache, vomiting, dizziness, neuralgia, and even epilepsy, insanity, chorea, and other troubles.

When a state of perfect equilibrium is impaired from either a weakness or abnormal tension of some muscle of the eye, the effects are apt to become manifested sooner or later.

Oculists and neurologists not infrequently discover defects in the eye never dreamed of by the patient himself. No one can deny that people sometimes live for long periods in houses with sewer gas, and in the most malarious regions, without apparently suffering in consequence, yet no intelligent man would attempt to prove to-day that these poisons are delusions because some people have escaped their influence. We must admit that eye defects are liable to become causes of impaired nervous energy because they demand an excess of nervous expenditure.

A general proposition regarding the treatment of nervous troubles may be thus stated: Every reflex cause that can be detected in an epileptic, mentally disturbed, or choreic person ought to be removed. The amelioration of these troubles may not come at once, and it may

not come at all in a small proportion of cases; but an effort should be made in each case to give nature every possible chance to reassert herself by relieving the nerve centers of reflex irritation. It is not always possible to state that the removal of the eye-strain alone in unsuccessful cases has completed the treatment, nor is it fair to infer that the eye work has been unproductive of any benefit.

I will give a description of a case of chorea (commonly called St. Vitus's dance), selected out of several hundred recorded cases, each being identified by initials and residence, with letter in many instances from patients and their physicians.

Mr. C——, a minister of the gospel. For about twelve years his family had noticed frequent facial contortions which he was unable to control. A trip to Europe and little writing in his study prevented its increase for about four years. After more active labor the facial contortions grew rapidly more exaggerated in character, every feature becoming horribly distorted; the eyes would close, the forehead become terribly wrinkled, and the nose and mouth would assume attitudes which no one could possibly imitate. The hour of retiring was particularly dreaded, because the facial spasms were terribly persistent and severe as soon as his eyes were closed and a recumbent position was assumed. The facial contortions were always least severe in the morning and grew more severe as the day progressed. No medical treatment had ever benefited the patient. Treatment and result are as follows:

A partial tenotomy was first performed; the facial spasms ceased in an hour, and no sign of chorea was observed for two days. On the third day a very slight twitching about the mouth developed; another partial tenotomy was performed. After the second operation the patient had few if any choreic movements. He stated that unless excited his face remained absolutely quiet, and that for the first time he had that day been able to attend a meeting of ministers and look them in the face without facial spasms while discussing church matters. Thus in less than one week were the contortions of his face almost completely arrested.

Insomnia. — Clinical evidence shows that a large proportion of subjects affected with persistent insomnia suffer from some congenital defect of the eyes, or from an improper adjustment of the muscles that move the eye.

When we stop to reflect we can understand how every letter on a printed page, as well as every object on the street or in our homes, requires a more or less perfect adjustment of the complicated muscular apparatus that so regulates the eyes in relation to each other as to enable them to see separately and yet perceive a single image. The

total aggregate of such perceptions during the sixteen hours of each day that we use the eyes is enormous, and, as I have said before, three factors enter into the proposition as to how long a time can elapse before the serious influences of such a leak of nervous energy will be felt in any given case where the eyes or the eye muscles are abnormal:

1. How much excess of energy over the normal amount is required to compensate for the defects connected with the sense of sight.

2. How much reserve capital of nerve force the individual starts out in life with.

3. How much nerve force the individual can generate day by day to meet the daily expenditure.

Let me report one case in this connection.

Mrs. B——, aged forty years. The breakdown in health began twelve months ago; it was attended with an extreme and persistent loss of sleep; an utter inability to read or sew; a more or less constant headache; an inability to concentrate her intellectual faculties for any length of time; and an aggravated type of mental depression. After any attempt at study she would lie awake most of the night. Graduated tenotomy was performed, and in five months she was able to fill all her engagements without any return of her bad symptoms. During one of her last visits she said: "I am stronger and have better health than I have had for many years."

Epilepsy.—No sadder misfortune can befall a human being than to develop epilepsy. Sooner or later an epileptic becomes aware that his attacks are horrible to witness, that they are liable to occur at very unfortunate and unexpected moments. Years of drugging and benumbing the cerebral centers is not curing the disease; such a principle of treatment is absurdly irrational and opposed to physiological research. To treat epilepsy by drugs without searching for all exciting causes is no longer creditable to the medical attendant. In a case referred to me in 1892, the following letter of Dr. Ellis W. Hedges, of Plainfield, N. J., received in 1896, reports the results of treatment:

"In reply to yours of July, 1896, I can only report fully in regard to one case. Mr. B—— has been perfectly well ever since. He works every day and has not had a single convulsion.

"Mrs. G—— moved to Buffalo about two years ago. I have heard nothing as to her condition. Just previous to leaving she called upon me and declared that she was a different woman mentally and physically since the operation—that it seemed to her as though she had been living in a dream for years past.

"I have watched these cases for years and saw them grow steadily worse under various forms of treatment, and I am convinced beyond doubt that at least some cases of epilepsy can be cured by proper operation done upon the eyes."

Insanity.—Many victims of insanity, especially some of the milder types, clearly show by their history that the mental disturbance did not develop while in perfect health, but that it was preceded by a decided nervous debility; therefore nervous prostration and insanity seem so closely related in many instances that I will speak of these types together.

The clinical histories of two cases that I shall report in this chapter are of this type. Neither of these cases justified much hope, if any, of ultimate recovery. They presented symptoms that pointed in the strongest way toward the existence of organic cerebral disease. They were hard to control by experienced attendants; they had not been benefited by medication, although they had been treated for some time by men of reputation. One was in such an extremely bad physical condition that probable duration of life seemed near its close, and in each instance the eye treatment was begun purely at the solicitation of friends rather as a last hope than from faith in its curative results.

One of these cases presented many of the typical symptoms of paresis, a disease that is generally accepted by physicians as a hopeless malady. Both of these cases were relieved.

Some years ago Weir Mitchell brought into prominence the rest-cure as a means of restoring health. It cannot be denied that by this method of treatment thousands of sufferers from nervous prostration have been greatly benefited or restored to health, but they have had to bear with patience its many unpleasant features for months at a time, isolating themselves from their families, deprived of writing to them, often confined to bed, fed under explicit directions, a trained nurse to direct them and practice massage and electricity as a substitute for exercise, and in no way allowed to use their eyes for reading, sewing, playing games, or other amusements. That this distinguished neurologist is not indifferent to eye-strain is evidenced by the fact that to-day he has the eyes of many of his patients very carefully examined during or prior to his rest treatment; possibly he has found that his cures are more rapid and permanent when eye-strain is corrected early than in years past when the testing of the eyes of neurasthenic patients was less frequently and certainly less thoroughly done even by oculists of repute.

I find in my case-book several letters from physicians that narrate equally startling results from the relief of eye-strain in cases of extreme mental disturbances. Furthermore, similar results have been

published by others from time to time within the past decade without apparently attracting the amount of attention that such results should warrant.

I feel sure that in the future more attention will be paid to the eyes of inmates of our insane asylums. In the past, as far as I can learn from medical directors of such institutions, nothing has been attempted in this line in a systematic way, either in this country or in Europe. I have pleaded with the medical superintendent to obtain and publish a complete set of eye tests, by the new methods, of insane patients under their care, but I have been met with the statement that the resident medical staff was not competent to do the work, and the labor of doing it was too great to undertake without a special appropriation to meet the expense of employing competent aid in making the investigation.

The question was naturally asked, Why do not asylums have a specialist in this new method of relieving eye-strain? Their response was that it took some time to master the science, and it was an exceedingly difficult one; that it took great patience and labor and knowledge of higher mathematics; and that there was not a college in the land that has or would allow the instruments necessary to teach it to be attached to the curriculum of study. Then they said, Did it not take Lister ten years to teach the profession if the antiseptic method was to be tested that they must wash their hands with great care, make their knives aseptic, and follow out the published plan of procedure with due regard to detail before the results obtained could be worthy or in any way reliable as a basis of success? Was not Harvey despised because he advocated the circulation of the blood, and McDowell condemned to professional ostracism when he first practiced ovariotomy? Did not Jenner, who stood high in professional esteem, incite to rage the populace when he advocated and practiced vaccination?

The treatment of this ocular condition is based upon facts which can be determined with the same scientific precision as the computation of an astronomical problem; it is supported by well recognized physiological laws; it has yielded, and is yielding daily, relief to many individual cases called from suffering humanity which medicine has failed to relieve; it has lived and steadily made progress year by year in the face of bitter and organized opposition.

CORRESPONDENCE.

THE MICHIGAN MEDICAL LAW.

To the Editor of THE MEDICAL AGE:

In replying to Dr. B. D. Harison's lame effort to answer my criticism of some methods pursued by the Board of Medical Examiners, I shall not reproduce my correspondence with him relative to sending him my diploma (copies of which letters I have on file), because I refrain from making public private matter, notwithstanding I might consistently do so, he having referred to it; but no good could accrue to any by publishing these letters, nor extracts from them. Suffice it to say I never conceded the right of the board to "demand corroborative evidence of the truth of his affidavit under the old law." My contention has ever been that the board has no authority to go back of the certified copy of affidavit recorded with the county clerk in fulfilment of the requirements of the old medical act. However, I did send what Dr. B. D. Harison denominates a "lame apology," which he discreetly accepts as "proof required," saying that I had "fallen down" in my attempt to "bluff." I never attempted to bluff; I had no occasion to do so, and the "falling down" was done by the Doctor when he accepted my "lame apology" in lieu of my diploma, especially after his abrupt, curt, imperious, peremptory demand "Send your diploma," with not so much as a modifying "or other evidence" which he now so meekly appends. My object in the apologistic evidence, as stated when sent, was to cut off contention and avoid, if possible, resort to court, although prepared to go there, if need be, to make out my case.

I shall attempt to review the Doctor's reply touching issues of interest to the public in general and physicians in particular. Dr. Harison says: "As the author of this particular subdivision (Subdiv. 1, Sec. 3) it was my intention to give authority to the board to judiciously review the registration made under the old act," etc., etc., and to give the "Board the legal right (which it has) to go behind the form of registration and adjudge of the facts in connection therewith." He further says: "It also has the power to investigate the fact and form of all the registrations under the act of 1883." What the Doctor's intention was, and what the spirit of the statute is, may be quite unlike; indeed, I fail to see any resemblance. Really, if his intentions are embodied in, so as to become an effective part of, the statute, then it is unconstitutional, for it would then be an *ex post facto* law. The constitution explicitly says: "No bill of attainder or *ex*

post facto law shall be passed." The courts have ever held that "an act of the legislature should not be construed to operate retrospectively, so as to take away a vested right, but be given a prospective operation." Evidently the Doctor is trying to get something out of his child that is foreign to it, or trying to transfuse into it something not born with it. If the operation does not result in the death of his offspring, it will at least eventually convince him that parents do not always impart their intentions to their progeny.

But Dr. Harison, as an expounder of constitutional law, tells us that "physicians have no vested rights in law, either in this State or in any one of the United States." Furthermore, he says that "it is in the power of the State to cancel any rights or privileges it may have given him." A total disregard for the fundamental principles of right and justice could hardly be excusable. The want of an understanding might lead to misapplication of good law. For the Doctor's edification I will quote some high authorities:

"Vested rights are defined to be, immediate fixed rights of present or future enjoyment."

"The legislature can create and increase vested rights, but cannot destroy them."

"Rights vested by law cannot be devested by a subsequent act of the legislature."

"A legislature cannot take away a vested right."

"No statute can constitutionally derogate a vested right."

"The legislature has the power to take away by statute what was given by statute, but not so as to disturb rights vested under the former law."

It must be conceded that every physician registered under the old law acquired rights by virtue of that act of the legislature, granting, if you please, that he had no vested right previous to compliance with the requirements of said act. The legislature conferred rights in the enactment of the old medical law that no subsequent act can take away. The old law created every registered doctor a qualified practitioner of medicine so far as its legal aspect could qualify.

I must differ with Dr. Harison in the belief that Subdivision 1 of Section 3, or any other part of the new medical act, is susceptible of being construed to give retrospective action. For the good of the act I sincerely hope the Doctor is wrong, while I would be glad were it possible to weed out the professionally unqualified who may find a shield in the old medical act. The Doctor may take either horn of his dilemma. The act is either unconstitutional, or he has no authority under it to "judiciously review the registration under the old act," or "go behind the form of John Smith's and George Jones's

registration and adjudge of the fact in connection therewith." Or, will he draw in his horns and resort to a legal course to depose any who may have fraudulently registered? I repeat: Statutory meaning of *legally registered* means compliance with the old law in registering, and *sufficient proof* in a statutory sense would consist of and lie in a certified copy of said registration under the signature and seal of the clerk of the circuit court, who is the county clerk. The established rules of *jus civile et lex non scripta* are a sure and safe guide.

I will not at this time review Dr. Harison's statements on the ministerial function of the county clerk and judicial power of the board. I will simply say he seems to think the board the "whole thing"—judge, jury, and prosecutor—an anomalous statute evolved from a prolific encephalon. The Doctor's sarcasm on philanthropic instinct savors more of vindictive cant than reason, and is not germane to any question at issue. I will add for the Doctor's consolation that I am not one of those who "are ever ready to criticize and find fault, but who are silent as death when energy and financial support are required." But I say, not boastingly, that every measure looking to medical legislation has had my hearty support for more than a quarter of a century, and I have had no little heated discussions with our several representatives during this time urging their support. I have been drawn into this discussion with Dr. Harison through motives prompted by his unreasonable efforts in the attempt to enforce what I have believed to be a good and desirable law.

E. S. Richardson.

Reed City, Mich.

The Philadelphia Board of Education has adopted the following requirements in regard to the hygiene of schools: The temperature of the room must not be permitted to be under 65° nor over 67°; occasional hygrometric tests are to be made to assure the moisture being kept at 55° to 65°; there is to be an air-supply to hot-air furnaces; air-ducts are to be at least four feet above the ground; windows of class-rooms are to be raised for ten minutes during recess; teachers are to prohibit expectoration on the floors, and eating candy at recess; janitors will scatter sawdust on the floors before sweeping, wipe desks and seats with a wet cloth once a week, and wash floors, doors, and banisters with hot soda solution; during epidemics they will disinfect the rooms with formaldehyde; drinking-water should be boiled; ordinary slates are to be abolished; and overcrowding of pupils in the different class-rooms is to be prevented. Beginning with October next tests of the hearing and eyesight will be made, and individual drinking-cups employed.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE DEMAND FOR A WIDER USE OF ANTITOXIN.

Since vaccination was devised for the prevention of smallpox, no expedient of medical science has received more substantial testimony to its value than that of antitoxin in the cure and prevention of diphtheria. The mortality statistics of the disease have had to be compiled anew, and diphtheria, far from being the most dreaded scourge of child life, has become a complacent and manageable incident in domestic misfortune. An unnecessarily high mortality, however, still prevails, and the thoughtful physician cannot be backward in asking how much of this is still avoidable. It is the opinion of most thoughtful observers that the old fetish of membranous croup is still responsible for many deaths that would be prevented by a timely diagnosis of diphtheria.

It cannot be urged too strenuously that membranous croup and diphtheria are identical in etiology. In ninety per cent of the cases of membranous croup the Klebs-Loeffler bacillus is found. Unfortunately, membranous croup is usually prevalent in localities where diphtheria is not endemic. Many cases appear to be sporadic. In the country and smaller towns membranous croup usually prevails, and its symptoms are often unlike diphtheria, except for the one cardinal symptom of laryngeal obstruction. On inspection of the pharynx no exudate is visible. Complete suppression of the voice usually ensues. Cyanosis comes from carbonic acid poisoning and failure to obtain air. No septic complications characteristic of diphtheria are present, for there is no general systemic infection. The child dies purely and simply from strangulation resulting from laryngeal obstruction.

How shall the physician manage these cases? In country districts

the opportunities for bacteriological diagnosis are sometimes lacking, and the physician has to rely upon his own convictions more implicitly than his more fortunate *confrère* in the city. The mortality of these cases is alarmingly high. If they could be excluded from the mortality statistics of diphtheria the malignancy of that disease would be estimated very differently. Would it not be far better in all these cases of laryngeal obstruction to give antitoxin always and invariably? No harm can come from the injection. It causes less trouble than vaccination. By making such a proceeding an invariable expedient many lives would be saved in those that now die simply from lack of opportunity to make a confirmation of the diagnosis possible by bacteriological methods.

EDITORIAL NOTES.

The Perfect Man.

The man of the future is to come from Colorado. Desirability of improving the race by carefully selected marriages has been talked about for a long time, and the Mountain State has set itself seriously to the task. A bill has been introduced into the legislature permitting only healthy, well-developed, and moral people to marry. The man must be at least twenty-five and the woman twenty-two. Both must be free from consumption, epilepsy, asthma, insanity, organic or hereditary disease of any kind, and must not be more closely related than fourth cousins. To carry out this law a county board of medical examiners is to be formed, and no one can marry until he receives a certificate. It is to be hoped that by this means all those of notorious reputation shall be excluded from the marital relation. It can only be hoped that the people of Colorado will find it as simple a matter to dispose of a deep-seated evil as it is to propose a remedy.

Liquid Air is Not Germicidal.

One of the claims of the liquid air people seems to have been punctured by Macfadyn's experiments reported in *The Lancet*, which show that bacteria may be subjected to a prolonged temperature of minus 190 centigrade and still retain all their vital properties.

ITEMS AND NOTES.

THE plague is reported to be at an end in Honolulu.

DR. ST. GEORGE MIVART died suddenly in London on April 1.

THE first hospital for the insane in China has been inaugurated at Canton.

A MOVEMENT is on foot for the establishment of a new university in Hamburg.

VON LEYDEN is the head of a committee recently organized in Berlin to promote the study of cancer.

THE bill for shorter hours for drug clerks in New York City has finally been passed by the Senate of that State.

THE next annual meeting of the Canadian Medical Association will be held September 12 to 14 at Ottawa.

AT an entertainment given recently by a church society at Lima, Ohio, about one hundred persons were poisoned by chicken salad.

IT has been announced that medical women will be admitted to the Liverpool School of Tropical Medicine on equal terms with men.

THE new naval hospital at the Mare Island yard in California is now ready to be turned over to the government, having been completed.

THE Paris Académie de Médecine has unanimously voted in favor of adding measles to the list of contagious diseases that have to be reported.

IN Illinois, under the new medical act, "Christian scientist healers" have full right to practice without supervision or control by any authorities.

A SUIT for damages has been entered by a citizen of West Toronto Junction against the town council for locating the smallpox hospital too near his residence.

A BILL prohibiting the use of tobacco by all persons under eighteen years of age, and by all minor pupils in public schools, is now before the Iowa State Legislature.

THE Tri-State Medical Society of Iowa, Illinois, and Missouri met in annual session at St. Louis on April 3 and 4, under the presidency of Dr. O. Beverly Campbell, of St. Joseph, Mo.

CAPTAIN E. L. MUNSON, assistant-surgeon United States army, has been awarded the prize offered by Dr. L. L. Seaman for the best thesis on "The Ideal Ration for an Army in the Tropics."

THE number of men lost in the Philippines since August 6, 1898, is as follows: Killed, 456; died of wounds and accidents, 276; died of disease, 1056; total 1788. Over 2000 men have been wounded.

A MEMBER of the Southern Kansas Methodist Conference was expelled a short time ago for practicing faith-healing. He had taken a diploma and took up faith-healing as a business in connection with healing.

RECENTLY the Duke of Westminster's horse, "Flying Fox," won the Eclipse stakes at Sandown Park, England, the purse being $50,000. The whole amount was turned over by his grace to the Alexandra Hospital, Rhyl, Wales.

A NEW research scholarship has been founded by the British Medical Association of the annual value of $1000, to be known as the Ernest Hart Memorial Scholarship, in memory of the late editor of the *British Medical Journal.*

HELEN KELLER, who is handicapped by the loss of the senses of sight and hearing, and consequent inability to speak, has passed her examinations for entrance to Radcliffe College. They were as strict as in the case of ordinary students.

WE learn from the *British Medical Journal* that on the first day of the congress against tuberculosis, to be held in Naples, a dinner will be given by the Neapolitan committee of the Italian National League Against Tuberculosis to 1200 of the poor of the city.

THERE was recently passed by the New York assembly a bill to provide for the establishment by the city of New York of a hospital for the regular treatment of pulmonary tuberculosis. The amount of money appropriated was $350,000.

ACCORDING to the *British Medical Journal*, a movement is on foot in Edinburgh toward procuring for Dr. Osler, professor of medicine in Johns Hopkins, a call to the chair of practice of physic in the University of Edinburgh, rendered vacant by the death of Sir Grainger Stewart.

At the Military Hospital at Rome on March 18 was unveiled a sculptured tablet of great beauty. The tablet is to the memory of the members of the profession killed in the campaigns in the Crimea, in Italy, and in Africa, 1848–1898. There are thirty names inscribed on it. At the base is the inscription: "The Colleagues, 1899."

Dr. E. S. Pettyjohn, who has for some years presided over the destinies of the Alma Sanitarium with such marked success, will shortly go to Europe under a commission from the Governor of Michigan to make an investigation of State and municipal institutions. The Doctor's successor at the health institution at Alma will be Dr. G. F. Butler, of Chicago.

Lausseur, the man whose name has been immortalized in connection with the fact that he was the patient on whose stomach Labbe, the great French surgeon, first performed gastrotomy for the removal of a fork, has just died, twenty-five years after the operation. *L'homme a la fourchette* created an immense sensation at the time, as it was the first occasion on which a foreign body had been removed from the stomach by a surgical procedure.

According to an exchange, Dr. Adolph Ziel, of Elberfeld, Germany, has just been sentenced to a year's imprisonment for having assisted conscripts in avoiding military service. His plan was to give some cardiac poison just before the conscript was to be examined, so that the heart would be found irregular in its action. He had cheated the government out of over 300 soldiers before he was apprehended. Several military surgeons were also sentenced to short terms for complicity in his scheme.

The degrees in medicine conferred by the German universities during the academic year 1898–1899 numbered 1050, according to the *British Medical Journal* of March 24. Berlin gave 87, Bonn 22, Breslau 30, Erlangen 47, Freiburg-in-Baden 60, Giessen 32, Göttingen 31, Greifswald 10, Halle 23, Heidelberg 32, Jena 34, Kiel 86, Königsberg 24, Leipzig 55, Marburg 28, Munich 134, Rostock 14, Strasburg 43, Tübingen 46, and Würzburg 147. These universities conferred 1208 degrees the previous year, and 1268 for 1896–1897.

Four London hospitals will benefit by a sum estimated at between $1,500,000 and $2,000,000 under the will of the late Prof. David Edward Hughes, F.R.S. The first trustees of the "David E. Hughes Hospital Trust Fund" are to be the treasurers of Middlesex Hospital, London Hospital, King's College Hospital, and Charing Cross Hos-

pital, who are to retain the capital of the fund under certain conditions. The will expresses the wish that after a period of twenty-one years the four hospitals will add to their respective funds as capital one-third of their income from Professor Hughes's bequest.

SEVERAL carefully observed cases of falling of hair from emotion have been recorded of late in the *Progrès Médical*, and a still more striking case, reported by F. Boissier, is now added. A normal, healthy farmer, thirty-eight years of age, saw his child thrown and trampled by a mule. He supposed it killed, and experienced in his fright and anguish a sensation of chilliness and tension in his face and head. The child escaped with bruises, but the father's hair, beard, and eyebrows commenced to drop out the next day, and by the end of a week he was entirely bald. A new growth of hair appeared in time, but finer, and exactly the color of the hair of an albino.

THE latest phase of the agitation in Italy against foreign medical practitioners is, according to the *Medical Record*, the approval by the government of a bill now before the chamber of deputies, in which it is forbidden to any one not possessing Italian qualifications to practice anywhere in the peninsula. To this there are two exceptions: The law is not effective against a foreigner who may be summoned in consultation in any special case, or who is in attendance upon a family or individual traveling or temporarily resident in the country. The second exemption is in favor of those who confine their practice strictly to foreign visitors, with, however, the fatal proviso that these practitioners are citizens of countries which accord the same privileges to Italian physicians.

NEW PUBLICATIONS.

INTERNATIONAL TEXT-BOOK OF SURGERY.

The second volume of the International Text-book of Surgery is a worthy compendium of its predecessor. The present volume deals with regional surgery, and contains thirty-six contributions from men who are recognized authorities on both sides of the Atlantic. There are several articles which are classical in character, although it would seem invidious to select any for special commendation when all have achieved such a high standard of excellence. Abdominal surgery is considered in several chapters. The surgical aspects of syphilis are admirably demonstrated in an article by Dr. Parker, of London. Gynecological surgery is admirably exemplified in an article by Dr. Henrotin, of Chicago. The editors each contribute notable essays. The work is amply illustrated by 471 engravings and eight full-page plates and colors. The work of the publisher is in admirable conformity with the value of the volume.

The International Text-book of Surgery. By American and British Authors. Edited by J. Collins Warren, M.D., LL.D., and A. Pearce Gould, M.S, F.R.C.S. Volume II: Regional Surgery. Philadelphia: W. B. Saunders, 1900.

MANUAL OF ANESTHESIA.

There are few, if any, manuals dealing exclusively with the production of anesthesia, although excellent articles are contributed to the various systems of surgery. This little work comments upon the entire question of general and local anesthesia, and will give the anesthetist much information of a useful character. A thorough acquaintance with the general rules for the administration of an anesthetic as they are recorded in this work will fortify the confidence of the physician in a proceeding which lightly undertaken is fraught with grave danger.

General and Local Anesthesia. By Aime Paul Heineck. Chicago: G. P. Engelhard & Company, 1900.

A POCKET DICTIONARY.

Dr. Gould's dictionary has long ago achieved a position among the best works of its kind, and nothing more is necessary than to call attention to the convenient and eligible character of the fourth edition. Medical students will find this book an enviable possession.

A Pocket Medical Dictionary, Giving the Pronunciation and Definition of the Principal Words Used in Medicine and the Collateral Sciences, etc. By George M. Gould, A.M., M.D. Fourth Edition, Revised and Enlarged. Thirty Thousand Words. Philadelphia: P. Blakiston's Son & Co., 1900.

A MANUAL OF THE PRACTICE OF MEDICINE.

Dr. Stevens's Practice of Medicine is compiled on the principle that "half our knowledge we must snatch, not take." It is a highly concentrated but extremely nutritious epitome of medical science, and will be found invaluable for ready reference or speedy enlightenment on essential topics.

A Manual of the Practice of Medicine. Prepared Especially for Students. By A. A. Stevens, A.M., M.D. Fifth Edition, Revised and Enlarged. Illustrated. Philadelphia: W. B. Saunders, 1898.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Generalized Melanosarcoma.

De Buck and Vanderlinden (*Belgique Med.*, No. 45, p. 584, 1899; abstracted in *British Medical Journal*, March 17, 1900) describe the case of a married woman, aged twenty-five years, who had suffered for nine years from lupus of the face, and who was in a condition of advanced anemia. Seven months previously she began to be affected with a swelling at the anus, which was now the seat of a considerable secretion. Examination revealed a large tumor of a black color, painful to touch, and secreting an abundant ichorous, blackish secretion. There was also hardness and swelling of the inguinal glands, especially of the left. The lungs and heart seemed normal. Believing that they had to do with a mass of hemorrhoids which had become gangrenous, the authors proceeded to extirpate them after the method of Whitehead. The wound healed well, but the glandular swelling increased, the labia majora became edematous, and by rectal and vaginal examination it was found that there was an extensive hardness surrounding the rectum and uterus. The glands in the left loin enlarged much and became fluctuating; they were incised, giving exit to a blackish serum. The blood showed a slight leucocytosis, and there was melanuria. The incision in the groin did not close, and about ten weeks after her entrance into hospital the patient died of marasmus.

At the autopsy, which unfortunately was incomplete, it was found that there was an abundant ascites of a brownish color, the omentum was much increased in size and contained numerous large cysts with blackish fluid, and in the liver and spleen were similar cysts. Microscopic examination showed that the case was one of melanosarcoma of wide distribution. Probably the starting-point of the whole process was in the anal tumor, but unfortunately it had not been preserved for microscopic examination.

Chronic Ulcer of the Stomach.

There is a form of ulceration of the stomach which, according to L. Sansoni (*Riforma Medica*, No. 219, 1899), has for its main characteristic the absence of HCl. Where this symptom occurs there exists a hemorrhagic erosion and not the typical round ulcer. In the com-

mencement of the disease ecchymosis occurs. After the breaking down of the mucous membrane the coverings of these spots remain as small flat erosions. Such ulcerations may be very minute. The differential diagnosis between the ordinary ulceration of the stomach and hemorrhagic erosion is that the hemorrhagic form never extends into the muscular coat. Clinically, it is to be noticed, as has already been mentioned, that in the hemorrhagic form there is absence of HCl in the contents of the stomach, and further, that the washings of the stomach reveal numerous thin particles of mucous membrane. These belong to the most internal layer of the stomach and never contain any trace of muscular fibers. The course of this disease is very much more favorable than that of the round ulcer.

Thoughts on Malignant Tumors.

Carcinomas, according to B. H. Buxton (*Journal of Cutaneous and Genito-Urinary Diseases*, April, 1900), contain connective tissue stroma, because there is an attempt at defense on the part of the organism.

Their increase is not prevented, because the cells can multiply in the newly formed lymph spaces of the stroma.

Sarcomas, as a rule, contain no connective tissue stroma, because they consist of the very cells which would be called upon to form it, and which are now in revolt.

Sarcomas contain numerous blood-vessels, because these always penetrate masses of immature connective tissue cells, whether in the embryo or the adult.

Certain sarcomas contain connective tissue stroma because the cells composing them are not ordinary connective tissue cells, so that the latter are able to attempt defense. The defense fails for the same reason as it fails in the carcinomas.

Tumors containing connective tissue stroma form metastases via lymphatics, because the newly formed lymph spaces in which their cells are growing open up communications with the regular lymphatic channels.

Tumors containing no connective tissue stroma form metastases via the blood-vessels, because the cells can easily break through the immature walls, whilst lymph spaces are absent.

Extensive Resections of the Intestines.

On account of the five cases of his own of extensive resection of the small intestine of over two meters, and also on account of thirty resections of the small intestine and eight extensive resections of the large intestine which Kukula (*Archiv für Klin. Chir.*, Band lx, Heft

4, 1900) has gathered from the literature of the subject, he discusses the experiences obtained by extensive shortening of the bowel in man and animals. There is do doubt that in the case of man the half of the small intestine, and in favorable cases even more, can be removed without exposing the patient to the danger of inanition. The maximum amount which may be removed has not as yet been positively determined. In a case of the writer's which terminated favorably, nearly two-thirds of the small intestine was removed with success. A positive necessity for the successful outcome of the operation where two meters shortening is necessary is the primary union of the two ends.

On the Question of Prophylactic Appendectomy.

Thos. H. Manley, in an article in the *Medical Review* of March 24, 1900, says that in this question there can be but one conclusion, viz., that there is no condition of any kind whatever which ever warrants any description of mutilation of the body in a well-formed, vigorous child. In the adult, however, prone to attacks of appendicular inflammation, there is no analogy, for there true conservatism always consists in medical measures and the abolition of the appendix.

MEDICINE.

The Urine in Disease.

Dr. Formad, in a recent number of the *Pacific Medical Journal*, concludes his article by formulating the following rules:

1. Sediment in the urine has no significance unless deposited within twenty-four hours.

2. Albumin in the urine does not indicate kidney disease unless accompanied by tube casts. The most fatal form of Bright's disease —contracted kidney—has little or no albumin.

3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate of lime crystal, which has its own peculiar form; urine, alkaline.

4. Every yellow crystal is uric acid if the urine is acid, or a urate if the urine is alkaline.

5. Mucous casts, pus, and epithelium signify disease of the bladder (cystitis) or other parts of the urinary tract, as determined by variety of epithelium.

6. The urine from females can often be differentiated from the urine of males by finding in it the tessellated epithelium of the vagina.

7. Hyaline casts (narrow), blood and epithelial casts signify acute catarrhal nephritis. There is much albumin in this condition.

8. Broad hyaline casts and epithelial dark-green granules and oil casts signify chronic catarrhal nephritis. At first, much albumin; after, less.

9. Hyaline and pale granular casts, and little or no albumin, signify interstitial nephritis.

10. Broad casts are worse than narrow casts, for the former signify a chronic disease.

11. The urine should be fresh for microscopical examination, as the micrococci will change hyaline casts into granular casts or devour them entirely in a short time.

12. Uric acid may, in Trommer's test for sugar, form a peroxide of copper, this often misleading the examiner into the belief that he has discovered sugar. Thus, when urine shows only sugar, other methods of examination must be used, preferably the lead test.

13. The microscope gives us better ideas of the exact condition of affairs in examination of urine than the various chemical tests.

Home and Asylum Treatment of Inebriety.

T. D. Crothers (*Virginia Medical Semi-Monthly*, March 9, 1900) says that the treatment of inebriety extends back over twenty centuries and more, and the recognition of it, as a disease, is still more ancient.

Its prominence and the increasing urgency for relief from medical men demand a new study of the whole subject along a scientific line.

The inebriate is literally poisoned, and starved, and degenerate, and there is no mystery about his condition or the results of treatment.

The possibility of restoration and cure is established beyond question.

Gold and other specific cures are only the application of common remedies, which every physician could use with greater skill and success.

Every case can be restored, and many of them permanently cured, by the intelligent cooperation of the family and asylum physician. Both home and asylum treatment are invaluable.

The public treatment of pauper inebriates and the incurable classes will be carried on in workhouse hospitals specially organized for this class. The treatment of those able to pay will be in special private hospitals, where the best means of science can be combined to meet the wants of each case.

The successful cure and prevention of inebriety is largely an unoccupied medical field, the solution of which opens up a new realm of practice, promising the greatest possibilities, which in the near future will be occupied.

The History and Etiology of Bubonic Plague.

The history of bubonic plague, according to Surgeon-General Sternberg (*Philadelphia Medical Journal*, April 7, 1900), extends back to a remote antiquity. Greek physicians of the second and third centuries before the Christian era have left a record of a pestilential malady characterized by the formation of buboes which prevailed in Libya, in Egypt, and in Syria. Two Alexandrian physicians, Dioscorides and Poseidenios, who were contemporaries of Christ, have given a description of the disease, which leaves no doubt as to its identity with the plague of more recent times. The buboes characteristic of the disease are enlarged and inflamed glands in the groins, in the armpits, and elsewhere, which in chronic cases may suppurate and discharge a virulent pus by which the disease is propagated. We now know that the germ of the disease is found not only in the suppurating buboes, but also in the blood of an infected individual. The writer says that it is a well known fact that rats are susceptible to the infection by plague bacillus. It has been suggested that infection may be carried from rats to man through the agency of the flea which swarms upon these rodents and deserts them when they die. Plague bacilli have been found in the intestinal contents of the flea, and it is said that when an infected rat is freed from these parasites it cannot communicate the disease by association with healthy rats.

The Treatment of Tuberculous Infection by Muscle Plasma.

At the meeting of the Paris Academy of Sciences, held on February 26, M. Hericourt and Professor Charles Richet (*Lancet*, March 17, 1900) made a communication as to the results of their researches into the mechanism of the action of the therapeutics of raw meat in cases of tuberculosis. Cooked meat does not produce the same effect because cooking coagulates certain albuminoid ferments. The important point, however, of the researches of these two observers is as concerns the active part of the meat. They separated the pulp from the muscle plasma, and have discovered that the plasma alone is active. It is the principles which are soluble in water that constitute the active portion of the meat. The question is not one of feeding or overfeeding, for the quantity of nitrogen contained in the plasma is very small, but it possesses immunizing qualities analogous to those of

other animal products which are injected into the veins. M. Hericourt and Professor Richet propose to call this new method of treatment "zomotherapy."

A Fatal Case of Carbolic Acid Poisoning in an Infant, Due to Absorption by the Skin.

R. Abrahams (*Pediatrics*, March 15, 1900) reports a fatal case of carbolic acid poisoning in an infant seven days old. The history of the poisoning is as follows: The nurse prepared a carbolic acid douche for the puerperal woman; accidentally she touched the pure carbolic acid with her thumb and index-finger; the same moment she touched the baby's right groin with the carbolized digits, whereupon, five minutes later, the infant fell into convulsions. The child died ten hours after the first convulsive seizure. The general convulsions ceased two hours before death supervened; both cyanosis and spasm of the face continued to the last minute. Death followed profound coma and heart failure.

Five Years' Experience in Private Practice with Diphtheritic Antitoxic Serum.

Frank W. Wright (*Pediatrics*, March 15, 1900), from an experience covering a period of over five years, concludes that the use of diphtheritic antitoxic serum usually cures favorable cases and often unfavorable ones; it prolongs life, lessens the severity of the disease, tends to prevent stenosis and the need for intubation in laryngeal cases, and when intubation is necessary it lessens the mortality; it prevents complications and sequelæ, and materially shortens the course of the disease.

THERAPEUTICS.

Thrush and its Treatment.

H. de Rothschild (*Progrès Médical*, March 3, 1900, p. 132) describes thrush as a disease occurring preferably among infant children of the poor, the contagious nature of which has been demonstrated, first, by Berg, of Stockholm, and by Robin, of Paris. The pathognomonic vegetation occurs in the shape of slightly adherent milk — white patches overlying reddened, but not ulcerated, spots in the mucous membrane of the mouth. Starting from the tongue, gums, or cheeks, these patches extend toward the uvula, the soft palate, the pharynx, esophagus, and even into the stomach. Considered in itself, thrush is

hardly a dangerous disease, if it were not for its frequent appearance in that serious condition, athrepsia. Prophylactic treatment requires careful attention to feeding and adequate hygienic precautions. Direct infection from the promiscuous use of rubber nipples should be avoided, cow's milk always properly sterilized, nursing bottles boiled, and rubber tubing entirely done away with. From a therapeutic standpoint mild cases are to be treated with alkaline lotions, viz., lime-water or bicarbonate of soda solution brushed over the whole internal surface of the mouth. In cases of longer standing a solution of bichloride of mercury 1-to-1000 should be substituted. Two or three treatments in twenty-four hours are generally sufficient. Comby suggests tincture chloride of iron once in twenty-four to forty-eight hours. Baginsky, of Berlin, prefers permanganate of potash in four-per-cent solution. Tordeur advocates the benzoate of sodium lotions at ten per cent. Mother's milk or wet-nursing is the best means for internal administration, and each nursing should be preceded with one to two drachms of lime-water. Baginsky recommends the internal use of three to four teaspoonfuls of a one-per-cent solution of resorcin in water. In children's hospitals and foundlings' homes isolation of patients and appropriate hygienic measures will often prevent the occurrence and always the spread of the disease.

Treatment of Rheumatism at the New York Hospital.

H. Dayton (*Medical Record*, April 7, 1900) says that in acute articular rheumatism the best routine treatment is bed, cathartics, milk diet during the acute stage, sodium salicylate by mouth or rectum, combined with sodium bromide if cerebral symptoms follow the administration of that drug, and methyl salicylate locally. In the later stages the methods employed in the subacute form are used.

In subacute articular rheumatism: bed if symptoms are severe, fairly liberal diet, alkalies or potassium iodide internally, methyl salicylate locally for the relief of pain, and the hot-air bath for stiffness or periarticular enlargement.

In chronic articular rheumatism: nutritious diet, alkaline waters in large quantities, potassium iodide or alkalies, and the hot-air bath.

In muscular rheumatism: salol and phenacetine internally; locally, methyl salicylate, the cautery, or belladonna.

In conclusion the writer calls attention chiefly to the use of sodium bromide in combination with sodium salicylate for combating cerebral symptoms and permitting larger dosage; to the hot-air treatment in subacute and chronic rheumatic conditions; and to the value of local treatment by methyl salicylate, which possesses the following advantages: (1) Rapid relief of pain; (2) avoidance of gastric irritation.

Drugs in the Treatment of Obesity.

H. Kisch (*Therapeutische Monatshefte*, February, 1900) states that while an occasional purge is beneficial in many cases of obesity, especially if there be hyperemia of the abdominal organs, the constant employment of powerful purgatives will lead to malnutrition from lessened absorption of food from the bowels. Alkalies should not be used for a long time continuously. Vinegar, which is popularly believed to cause increased dissolution of fat, really produces cachexia from chronic poisoning. The same statement holds good in regard to iodine. Iodides are indicated only in advanced cases, when rapid reduction is required. Pilocarpine, which reduces fat by inducing diaphoresis, should be used very cautiously when the heart is fatty; vapor baths also require a sound heart and arteries. Thyroid extract is inconstant in its effect, and may cause fatigue, loss of muscular strength, and glycosuria. If given at all, it should be in small doses, and the patient should be carefully watched.

Sidonal: A New Remedy.

According to the investigations presented by Weiss, at a recent meeting of the Berlin Society for Innere Medicin (*Medical Press*, March 28, 1900), chinic acid has the property of limiting the formation of uric acid in the system. Jaffe and Darmstaedter had made a preparation by combining chinic acid and piperazine, and had forwarded a sample to the clinic in order to have its actions ascertained. The testing of it had shown that the preparation really had a great effect in checking the formation of uric acid. If five to eight grammes of sidonal was given daily the excretion of uric acid was diminished from forty to fifty per cent, the quantity of hippuric acid being increased. As there was no increase in the after periods, it was evident that the action was not simply to retain the uric acid in the system. As hippuric acid is very soluble in water it has no injurious influence. From the investigation it appears likely that sidonal will be a useful remedy in gout.

Therapy of Herpes Zoster.

Bleuber (*Neurologisches Centralblatt*, No. 22, 1899) recommends an ointment made with one-per-cent cocaine in lanolin. A thin layer is spread with the finger or cotton mop over the diseased parts and covered by a bandage. The author has treated a great many cases in this manner with marked success.

Normal Saline Solution.

Eberhart (*Therapeutische Monatshefte*, July, 1899) deprecates the use of normal saline solution in the strength of 0.75 per cent, which destroys the red corpuscles of the blood, and suggests a 0 9-per-cent solution as being more nearly physiological.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,
Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

The Cause and Prevention of Infant Mortality.

The milk industry, according to E. Wende, health commissioner of Buffalo (*Pediatrics*, March 1, 1900), should be under both State and municipal control, and the following features are suggested:

The license system, the fee, periodic systematic inspections, with revoking power, and penalties for dereliction.

The inspection system should include inspection of herds (tuberculin tests), food, animal care.

Demanding sanitary environment and buildings, correcting existing evils, and examination and approval of plans, pending erection of new buildings, which should comply with a standard of sanitary construction, with especial reference to specific requirements of the business, viz., separate milking and stabling quarters, proper cubic air-space, non-absorbent material.

Scrutiny of water-supply, standard feeding, health of employees, hygienic care of utensils and cans, cleanliness and protection in milking.

Definite rules governing all procedures, particularly as to the cooling process, preparation for the market, and the relation to the varying seasons.

The differentiation of the various characters of milk by differently colored or shaped cans, which are properly labeled with date of milking and time of shipment.

Prohibition of milk preservatives and coloring agents; of alteration and of the marketing of milk from diseased, sick, or parturient cows; of the use of disinfectants, their necessity implying bad sanitation.

The prohibition particularly of refuse or swill food upon any dairy premises; of any food by reason of decomposition or fermentation considered unhealthful; and of the association of other domesticated or household animals with cows.

A standard of quality, with periodic testing and analysis.

Veterinary inspection, with distinction and compensation therein, and quarantine against the introduction of tuberculous cattle from without the State.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Fibroids—Vaginal Enucleation vs. Vaginal Hysterectomy.

Where operative treatment is required for uterine fibroids (not including polypi), pelvic or abdomino-pelvic, below the level of the umbilicus and approachable *per vias naturales*, H. Briggs (*Liverpool Medico-Chirurgical Journal*, February, 1900) submits the following conclusions:

1. Greater safety and better remote results are obtainable by the vaginal than by the abdominal route.

2. Exception in favor of abdominal enucleation in well-defined subserous growths, the uterus normal in length, in women below forty-five years of age.

3. Vaginal hysterectomy is the best and safest operation for subserous growths where the dimensions of the uterine cavity are increased, probably by interstitial or submucous tumors, or where the latter are known to coexist.

4. Vaginal enucleation ought to be more frequently adopted as the best operation for submucous and interstitial tumors.

5. Complete anterior section of the dilated cervix renders exploration of the uterus more reliable and enucleation easier.

6. Piecemeal extraction of growths merely lengthens the operation.

Cæsarian Section in the Dying Woman; Living Child.

A. Prokess (*Centralbl. f. Gynäk.*, March 3, 1900) remarks that Cæsarian section performed after the mother's demise, barring cases of sudden death (apoplexy, burns, accidents, etc.), promises but poor success, inasmuch as the fetus almost always dies before the mother, because of reduced blood-pressure and insufficient oxygenation of the maternal tissues, which in turn induce asphyxiation of the fetus. Hence the idea of performing Cæsarian section on the dying mother (Stein, Ritgen). Nevertheless, it took until 1840 before the first case of this nature was operated upon (by v. Roser). He was soon followed by others, and in almost every case they succeeded in extracting a living child, which not only justified the operation *per se*, but sanctioned it as preferable to Cæsarian section *in mortua*.

Prokess adds the report of a similar case occurring in his own practice. Patient was a nullipara, twenty-five years old, eight months pregnant. She was comatose, and entered the hospital with a diagnosis of meningitis. Since about ten days fever and excruciating headache. No convulsions. On admission, the patient was cyanotic, extremities cold, no edema, exophthalmus, pupils and cornea devoid of reflexes, stertor, temperature 104° F., pulse 120.

Child in first position, vertex presentation; no fetal heart-beats to be heard; fetal movements distinctly perceived once. Cervix patulous, membranes flabby. Urine devoid of albumin or casts. Mother moribund. Cæsarian section was performed under aseptic precautions, and fetus extracted feet first; child alive to date. Artificial delivery of placenta. Uterus closed by two rows of sutures. Peritoneal "toilette" and abdominal sutures. Flannel dressing. Uterus retracted very rapidly and reduced to less than one-half by the end of the suturing stage. Mother died in eight hours. Post-mortem: Thrombosis of the sinus (cause unknown), softening of the brain, edema of lungs.

Forceps in Mortua, with Living Child.

Fleischmann's previously reported case induced A. E. Neumann (*Centralbl. f. Gynäk.*, 1900, No. 10) to relate a similar experience which fell to the lot of his friend, Dr. Koerbitz, of Berlin, in 1869. Koerbitz was called posthaste to the bedside of a woman who died suddenly during childbirth, and who had, as he learned afterwards, complained for a time back of increasing dyspnea and of progressive edema of the legs, without ever consenting to see a physician. The woman having undoubtedly died, Koerbitz wasted no time in attempts at reviving, and applied forceps (at least fifteen minutes after the mother's demise). A scarcely asphyxiated girl was born, and remained alive. This case offers the longest recorded interval between the mother's death and the birth of a live child. The cases of Henricius and Piskacek took five minutes, Fleischmann's ten minutes. Neumann inclines to the belief that sudden death during childbirth, occurring in highly dyspneic patients at the very time when they are made to lie down in view of instrumental delivery, is often traceable to the reclining posture which they are forced to assume.

In this connection he reports another case in which he found himself compelled to deliver the woman in the standing position, for fear that, with the extreme generalized edematous condition and existing orthopnea, even a trifling recumbency might induce death of the somnolent, semicomatose woman. Patient was six months pregnant. Artificial dilatation, craniotomy, delivery. Edema not improved, heart

failing. Incisions made along the legs allowed quarts of serous fluid to escape; patient gradually revived. After nine days spent in an armchair patient insisted upon returning home. Albumin present one-half per cent, no casts; hardly any edema left. Aside from compensated cardiac insufficiency, patient remains in a fairly healthy condition.

Calomel an Antiseptic in Confinements.

Theopold (*Deutsche Med. Woch.*, 7899, p. 818) calls attention to the use of calomel in obstetrical antisepsis. Out of two hundred or more confinement cases he never lost one patient, and rarely feels called upon to trouble further about his cases, which usually take a normal course. He recommends the use of a shallow, wide-mouthed bottle holding about two ounces of calomel, into which he pushes the examining fingers, previously cleansed, in such a manner as to fill the periungual and subungual sulci with the powder. All instruments and tampons used in his practice he treats in the same manner.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH., Attending Neurologist to Harper Hospital.

Nasal Drainage of Cerebrospinal Fluid.

In the *New York Medical Journal* of March 31, 1900, G. W. McCashey reports a case of cerebellar tumor in a young woman who attributed the origin of her trouble to la grippe four years previously. Severe headaches were present, likewise tinnitus (double), involvement of the motor branch of the fifth nerve, gradual effacement of left visual field from below upward, later no perception of light in either eye, and the left ear became almost totally deaf. Vomiting was an insignificant feature. Death and autopsy confirmed the diagnosis of basal tumor. About two months before death there commenced a profuse discharge of serous fluid from the right nostril amounting to several ounces a day. Within an hour after hearing returned in the right ear and remained until death. This was apparently a drainage of cerebrospinal fluid through the cribriform plate of the ethmoid bone into the nose.

Curiously enough, in the same issue of the journal W. Frundenthal reports a case of drainage of cerebrospinal fluid through the nose. This, too, dates from a "high fever" followed by bronchial cough,

and later a steady dripping from the nose. A severe headache had preceded the dripping for a year, and on its occurrence impaired hearing improved. If the discharge subsided cerebral symptoms increased, and on its later recurrence grave mental conditions which had ensued were at once relieved. The source of the discharge was sought for by most careful examinations, and its probable nature determined by chemical analysis. A minute amount of phosphorus was found, as also 0.05 per cent of sugar. Twenty handkerchiefs a day were soaked by the discharge, which in many ways was most annoying. Treatment was idle and useless.

Neurological Editorials.

The excellently edited *Journal of the American Medical Association*, in its number of February 24, fairly bristles with editorials upon neurological topics. A "Newer Conception of the Cranial Nerves," the "Pathology of the Cerebral Vessels, Especially in Relation to Mental Diseases," and "The Etiology of Neurasthenia," are all thoughtfully discussed.

We can scarcely follow at length into the realms of comparative neurology for newer conceptions of the cranial nerves, but certainly we recognize as timely any emphasis of the great part which vascular changes play in the development of nervous and mental diseases.

Dr. E. A. Christian, of Pontiac, was one of the early and thoughtful writers to discuss the great importance of arteriosclerosis in the development of many conditions, the pathology of which had been obscure, and it is now recognized that arteriosclerosis develops at a very early age in a large number of the insane. Arterial changes are largely concerned in the pathology of general paresis, and at least three different processes are observed in cerebral syphilis—obliterating endarteritis, gummatous arteritis, and a fibrous and hyaline degeneration of the media without much involvement of adventitia or intima; the resulting thickening, however, greatly lessens the lumen, when thrombosis may further lead to entire closure.

General Pathology of Mental Diseases.

In the *American Journal of Insanity* for January, 1900, Henry J. Berheley contributes an extended article upon this general subject, from which a few salient extracts are made:

"The pathology of mental disorders may be roughly divided into two parts, the one belonging to the so-called functional disorders, from which recovery is not unusual; the other, that of the organic

degenerative type, in which an eventual restoration to health cannot be expected."

"Heredity is by far the most important factor with which we have to deal in the consideration of the pathology of the main types of insanity."

"Foremost among the actual lesions of the cerebral tissues that predispose to degenerative insanities are those of the vascular structures, that ordinarily are classed as periarterial, endarterial, and atheromatous changes."

"Toxic conditions, gastrointestinal or otherwise, may play an important part in the dementias of earlier life, which occur mainly in hereditarily burdened persons."

"The macroscopic appearances of the substance of the brain are rarely characteristic of any single form of mental disease. In the chronic insanities, atrophy of the entire cortex is almost universal."

"Of the many morbid processes that weaken and injure the sheaths of the arteries, the condition known as arteriosclerosis or arteriofibrosis is by far the most wide-reaching in its effects as well as the most frequent."

Mental Fatigue.

Edward Thorndike, in the *Journal of the American Medical Association* of March 24, 1900, presents conclusions as to mental fatigue quite at variance with those arrived at by Kraepelin, Griessbach, and a host of other investigators. He takes no stock in any theory which contemplates the mind as in any way akin to a storage battery, the energy of which is depleted by steady use, and apparently chooses to disregard utterly the work of those histologists who find quite a difference in the cell condition of the bird at rest through the day and the other who has flown long and far. Doubtless he would deny any relation between motor and mental functions.

Thorndike believes there is no such thing as a pure feeling of mental incompetency, that mental work is not a simple matter of mental energy, that mental fatigue is not like a physical weariness, and requires different treatment. While admitting the non-helpfulness of his views, he feels sure that they are better than a false solution on an artificial basis. Meanwhile, many neurasthenics would strongly disagree with him as to there being no such thing as a pure feeling of mental fatigue, and thousands could attest the success of therapeutic measures, resting entirely upon the basis which he proposes to so summarily reject.

THE MEDICAL AGE

VOL. XVIII. DETROIT, MAY 10, 1900. No. 9.

ORIGINAL CONTRIBUTIONS.

ADDICTION TO DRUGS, ESPECIALLY IN REFERENCE TO THE MEDICAL PROFESSION.*

BY RICHARD DEWEY, M.D., WAUWATOSA, WIS.

The recent general discussion of drug habits, especially with reference to the question whether an undue number of the medical profession are victims of this addiction, has aroused an interest which warrants further inquiry and renders discussion desirable, to bring out the facts whereon to base correct opinions.

The first question is, What predisposes to drug addiction? Why do certain persons, plainly knowing the injurious effects, slavishly employ morphine, cocaine, etc., until ruin of health and character is wrought? Lack of intelligence or of strength of purpose, or both, must be present, and it is generally true that victims of such addiction are so defective in equilibrium or limited in intelligence as to be inherently prone to excess.

Inquiring next whether inebriety in drugs differs from other vicious habits essentially or only accidentally, one is led to see that the vast preponderance of those who, for instance, are addicted to the use of alcohol are those who more closely come in contact with it, as persons in and near saloons, bars, liquor shops, breweries, distilleries, wine-cellars; and in like manner, those who resort to drugs are those who most easily reach them and have them ever at hand or before their eyes—physicians, druggists, nurses, and members of their families—although a certain *penchant* for certain intoxicants exists in some cases irrespective of accessibility. The resort to drink or drugs is, however, largely a matter of accident, and the essential things are the instability of the individual and ready access to the given intoxicant. The same ruin may be wrought by other poisonous agents. There

*Read before the Chicago Neurological Society.

are nitrogenous "sprees" and "jags" of carbohydrates which are as surely vicious to health. The victim of drink or drugs, however, becomes a spectacle to gods and men, while the destruction wrought by other sensual gratifications is often thought to be due to a mysterious providence. The drunkard, like the poet, is "born, not made," but he who is most prone to excess and suffers most under the tyranny of an intemperate and ill-balanced organization *may* so place himself as to escape the disaster lying in wait for him.

There are all possible degrees of continence, temptation, and opportunity, and there is no means of drawing hard and fast lines, but in a general way all victims of these excesses are unstable and neurotic.

Among those prone to excess, examples of great genius, rare gifts, and splendid talents are found, like Alexander the Great, Coleridge, De Quincey, Burns, Daniel Webster; but that the incontinence was no necessary part of genius itself is shown by the fact that still greater geniuses, like Dante, Shakespeare, Milton, Goethe, present none of these glaring defects; and on the other hand, the average of those who are inebriates is an average of low intelligence and morality.

Careful examination of these cases to determine if physical degeneracy was an associated factor has failed to show that it was; indeed, it has been noticeable in the essayist's cases that fine specimens of physical development abound, and yet the mental and moral stigmata, irritable mind, and nervous system were almost invariably present. It is shown that the habit of resorting to drugs grows insidiously, and soon a state exists which is intensely sad to contemplate. The victim enmeshed in the snare will either emancipate himself by a series of toils and struggles like the combined tortures and labors of Tantalus and Sisyphus, or, like Prometheus bound, his vitals are for all time to come to be preyed upon by the ravening vultures of remorse, hopeless resistance, alternate prayers and curses. The puzzled will wrestles with the chains and bars of servitude. The contradictions are so great as to be not inaptly described by the couplet:

> You can and you can't; you will and you won't;
> You'll be damned if you do; you'll be damned if you don't!

Many, however, have no desire to reform from a moral point of view. The pains and penalties they suffer make them wish for relief —provided it can be accomplished without too much inconvenience. Others desire so much relief as will enable them to go on with a career of self-indulgence, and the physician who attempts to aid sometimes has his choice between assisting at a farce or bidding his

patient find some one else to participate in a course of deceit and chicanery.

In studying these addictions one is surprised to find how often several of them are combined. Alcoholic intemperance is exceedingly common with all drug addictions, and taking those patients given to morphine, one will find tobacco (especially cigarette smoking), chloral, cocaine, trional, all forms of alcohol, all the coal-tar preparations, tea and coffee, excessively indulged in, together with the greatest excess and irregularity in diet and exercise — there is no measure or moderation in such persons, who are constitutionally extremists. In the case of the cocainist it frequently becomes impossible to continue the cocaine, and the patient then "sobers off" for a time on morphine —to be able to go on again with the more attractive mistress of his affections. The quantities of these intoxicants that will be tolerated are also surprising. A young man who consulted me had used thirty grains of morphine and four of cocaine daily for more than a month. Another, himself a physician who had been cured twice and remained well seven years the first time, but only a few months the second, in his third attack took in 128 consecutive days 6452 ounces of whiskey, 725 grains of cocaine, 4276 grains of codeine, and 292 grains of morphine.

Erlenmeyer* remarks that those who treat disease furnish the larger number of habitués. Physicians, druggists, nurses, or the wives of such, are in the majority. This observation was made at least twelve years ago by Erlenmeyer, and as this question of the extent to which physicians use morphine is one of great interest at the present time, I shall seek in this paper to present some few details bearing upon this point.

In reference to the extent to which physicians are addicted to these habits, quotations are given from Crothers as follows: "In a general history of 3244 physicians residing in the eastern, middle, and some of the cities of the western States, twenty-one per cent were found using spirits or opium to excess. Six per cent of this number used morphine or opium prominently. Ten per cent were using opium or other drugs secretly outside of this number. At least twenty per cent, including this number, used spirits in so-called moderation.

"In another study of 170 physicians, seven per cent used opium or morphine, and six per cent were secret drug-takers.

"From the personal observation of a number of physicians who

*The Morphine Habit and its Treatment. (Die Morphium Sucht und ihre Behandlung.) Dr. Albrecht Erlenmeyer. Third Edition. Pub. Ludwig Hauser, 1887; pp. 463. Reviewed by Spitzka, *Am. Jour. Insanity*, January, 1888, p. 418.

have a large acquaintance with medical men, from eight to ten per cent are either secret or open drug or morphine habitués.

"These figures appear to be approximately correct, and show that at least from six to ten per cent of all medical men are opium inebriates. This is undoubtedly a conservative statement, considering the fact that drug-takers, and physicians in particular, are secretive and conceal their use of drugs, particularly where it implies weakness and reflects on their social standing."

Dr. Crothers has been criticized for giving occasion to unwarranted inferences, but the general consensus of opinion is that whatever the details may be, attention has been drawn to a real evil.

Dr. Orpheus Everts informed me that about twenty per cent of opium habitués within his knowledge were medical practitioners. He considers, however, that owing to the very large preponderance of the laity who seek Keeley cures and employ various proprietary and secret means in the hands of the irregulars, the proportion of physicians in regular medical institutions is abnormally increased, and gives an incorrect idea of the relative number of physicians—a consideration undoubtedly entitled to much weight. The general medical officer of another large sanitarium found of all cases of drug addiction coming under his notice in the last five years, thirty-one per cent were physicians. A friend, knowing the status in one of the larger hospitals in Greater New York, writes: "Since my connection with the hospital (not over fifteen years) I know twenty-one doctors on the staff (of internes) who were either morphine or cocaine fiends, or both. There may be and probably are many more that I know nothing about. . . . If you asked how many drank to excess my answer would be: For several years there have been only one or two of the whole staff who did not."

The statistics as to morphine habitués treated in Prussian sanitariums show that of sixty-two male patients, almost one-third were physicians, and of eighteen female patients, three were wives of physicians.

My experience is that in twenty-eight cases of morphine and cocaine addiction under my care in four and a half years, thirteen were physicians, a percentage of forty-six. Taking physicians and the sporting fraternity together, the percentage would have been seventy.

The sporting class and demi-monde are specially prone to drug as well as alcoholic excesses. I would emphasize, however, the fact that a great difference exists as to the reasons for these excesses in one case and the other. The physician is wearing himself out in loyal and unselfish service; the other class in vicious and licentious courses.

He is watching at the sick bed, while they are reveling; he takes something to brace himself for a new effort for humanity, while they are engaged in plundering and pandering.

The conclusion arrived at is that the percentage may be overestimated or underestimated, and is likely never to be accurately determined. There is, nevertheless, far more inebriety of this kind than appears on the surface. It is also likely to be overestimated in the public mind and an unjust suspicion to attach to the profession. As a professional body we should not only be virtuous, but *above suspicion*, and if necessary should promptly repudiate drug habits and those who practice them.

I have not sought to say anything here of the interesting subjects of diagnosis and symptoms of drug habits, of prognosis or of therapeutic means—all of which merit new and thorough study, and concerning which I hope to give my experience at another time.

I will close with a word concerning the most important subject of all—prophylaxis. It should be an inflexible rule with every physician neither to prescribe nor use the drugs that induce vicious habits except when absolutely indispensable and when absolutely controlled by himself alone, and, furthermore, never to employ these powerful agents of good or evil *in his own person* except when prescribed for him on each occasion by a brother physician in whose skill and integrity he may place absolute confidence.

DISLOCATION OF THE EXTERNAL SEMILUNAR FIBROCARTILAGE OF THE RIGHT KNEE; REMOVAL OF THE CARTILAGE—A CASE OF COMPLETE RUPTURE OF QUADRICEPS EXTENSOR TENDON TREATED BY SUTURE OF THE TENDON.

BY A. E. HALSTEAD, M.D, CHICAGO.

J. M. D——, male, aged thirty years, was kicked by a horse nine years ago on the anterior and outer side of the right knee. The joint immediately became greatly swollen and very painful. These symptoms lasted for a month and then gradually subsided. The knee, however, never fully regained its normal condition. About one year after receiving this injury, while turning suddenly on the right leg, patient felt a sensation as if something had given way in the joint. The knee again became swollen, painful, and remained so for several days. Since that time the same symptoms had frequently recurred, always after twisting the knee, and usually after turning about suddenly. At times he could feel a small body projecting from the joint just external to the ligamentum patellæ, which disappeared with a

click under pressure. The joint never became locked at any time. On examination the knee appeared slightly swollen, measuring one and one-half centimeters more than the joint on the opposite side. A small quantity of fluid could be detected on palpation. While the joint was extended a defect could be felt just above the outer tuberosity of the tibia. If manipulation was carried still farther, particularly on inward rotation of the tibia with the leg semiflexed, a movable body could be found occupying a position corresponding to the depression just described. There was considerable pain on pressure over this point at all times. There was marked relaxation of the ligaments of the joint, permitting of an abnormal degree of lateral movement at the knee. Complete extension was impossible, even when considerable force was employed. Some atrophy of the thigh muscles was apparent.

Treatment.—Operation October 24, 1899. After the usual antiseptic preparation, the knee-joint was opened by a longitudinal incision along the outer border of the patellar tendon. On opening the joint a considerable quantity of fluid (four to six ounces) escaped. Exploration revealed a piece of loose cartilaginous tissue corresponding in shape to the anterolateral two-thirds of the external semilunar fibrocartilage. A defect was found in the fibrocartilage identical in shape with the detached portion. After removal of the cartilage, the wound was closed by uniting the capsule and fascia with catgut and the skin with a subcutaneous silkworm-gut suture. After the usual dressing was applied, the joint was immobilized by placing it in a plaster cast. One week later the wound was dressed and the suture removed. After this massage and active and passive movements were employed until function was completely restored.

The immediate cause of dislocation of the semilunar cartilages of the knee-joint is usually a violent wrench to the knee while the leg is semiflexed, thus permitting overrotation of the tibia. The predisposing causes are chiefly chronic inflammatory processes in the joint, which ultimately result in weakening and relaxation of the ligaments of the joint. Shaffer has recently called attention to this condition, and has shown by measurements and skiagraphs that the ligamentum patellæ is lengthened in these cases so as to make it impossible for the patella to be applied accurately to the anterior surface of the joint during the contraction of the quadriceps. Frequently this relaxation of the ligaments is congenital or dates from early childhood, and may in some cases be the result of early rickets. It is in these cases that comparatively slight injuries may be sufficient to dislodge these cartilages. In other cases, after a violent injury, with dislocation of the cartilage, the recurrence of the dislocation is facilitated by the chronic

inflammatory condition which follows the injury. In the case presented there is no doubt that the kick received upon the knee simply acted as a predisposing cause, while the cartilage did not become detached until a year afterward.

The symptoms produced by dislocation of the semilunar cartilages are usually so characteristic that a diagnosis can be made at once. They are:

1. Locking of the joint in a semiflexed position. This may or may not occur when the cartilage is first displaced. It is caused by the cartilage becoming "nipped" between the articular ends of the tibia and femur in such a way that complete extension cannot be made.

2. This condition of locking of the joint is associated with severe pain and rapid swelling of the joint, which are greatly relieved by reduction of the dislocated cartilage. Reduction may take place spontaneously or as a result of manipulation.

3. These attacks are always followed by a more or less acute inflammation of the joint capsule with an effusion into the joint which may last for several weeks.

4. On examining the joint a deficiency may be found corresponding to the position of the anterior margin of the dislocated cartilage. This defect is frequently found for the reason that displacement of the cartilage inward is the rule. In a few cases the cartilage may be found projecting from the joint.

5. In recurrent dislocations the leg cannot, as a rule, be completely extended even under anesthesia. There is also found in these cases great relaxation of the ligaments, which permits of considerable lateral movement of the joint. In the case reported this was quite noticeable, as was also the increased length of the patellar ligament.

The first mentioned symptoms, particularly the locking of the joint and the acute synovitis following, may occur in any case of movable body in the joint. The only positive differential point between joint-rice and detached semilunar fibrocartilage is to find on palpation the deficiency spoken of, or a body which in shape corresponds to the fibrocartilage. Again, it may be mentioned that abnormal folds of the ligamentum mucosa or pedunculated bodies drawn into the joint may give rise to identical symptoms and cannot be differentiated from the condition under consideration until the joint has been opened.

The treatment of dislocations of the semilunar cartilages can best be considered under two heads: (1) The treatment of those seen immediately after the displacement has occurred; (2) the treatment of chronic or recurring displacements. In the first class, when the

patient is seen immediately after the accident, replacement of the cartilage should always be attempted. This can usually be accomplished. When it is replaced the joint should be immobilized and thus retained for two or three weeks. Following this massage should be employed until the joint regains its normal state. In the second class we have a great variety of methods of treatment recommended. Many consider that these cases can be treated best by the use of a supporting apparatus to the joint; others recommend rest and massage, with subsequent artificial support of the joint by a mechanical apparatus of some kind. Without doubt an apparatus such as Shaffer recommends, that will prevent rotation of the tibia, will tend to prevent recurrence of the dislocation; but the essayist questions whether, in chronic cases, a fixation of the cartilage ever occurs under this treatment. The chief objection to an artificial support to the joint is that with it the relaxed ligaments seldom regain their normal tone. In these cases massage and rest are valuable adjuncts tending to restore tone to the ligaments, but cannot effect fixation of the cartilage.

The rational treatment in all cases, when immobilization has failed, and in recurring dislocations, is to open the joint and either suture the cartilage in place or remove it, as is indicated in the individual case. In old cases, where the cartilage is bruised and inflamed, it is always best to remove it. In the more recent cases, when the cartilage is in a relatively normal condition, an attempt to suture it in place may be tried. No permanent disability results from the removal of one of these cartilages. After the operative treatment has been employed, it should always be remembered that the joint ligaments should be restored as far as possible to their normal state by massage. In this connection may be mentioned the suggestion of Bennett, that strengthening of the tensor vaginæ femoris and the gluteus maximus is indicated on account of their connection with the iliotibial band, which is one of the chief agents in preserving the normal tension of the capsule of the knee-joint.

M. W——, aged fifty, shoemaker by trade, was admitted to the Cook County Hospital January 1, 1900. On the day before admission he had, while walking rapidly, tripped on the sidewalk, and after making an unsuccessful effort to regain his balance had fallen heavily on the left knee. Immediately after the fall he felt a severe pain in the knee, and was unable to stand upon the left leg.

On examination of the patient after his admission to the hospital, the knee was found to be greatly swollen and very painful. The skin over the knee and from the middle of the leg to the middle of the thigh on the flexor surface was discolored from extensive ecchymosis.

On further examination there was found a complete transverse rupture of the tendon of the quadriceps extensor. The appearance of the limb was characteristic—the greatly swollen knee with a depression above the patella; the fingers pressed into this depression could easily outline the condyles of the femur and the anterior surface of the lower end of the shaft. The patella was found of normal size and outline and freely movable. The retracted proximal end of the tendon could be located two and three-fourths inches above its upper border. There was complete inability to extend the leg.

Treatment.—The leg was elevated and an ice-bag applied to the knee. Under this treatment the swelling rapidly subsided and the pain disappeared. On the eighth day after the injury, after the usual preparation of the leg, the knee-joint was opened by a longitudinal incision extending from the middle of the patella to three and three-fourths inches above its upper border. On opening the joint there was found considerable clotted blood; this was removed by washing out the joint with a normal salt solution. The quadriceps tendon was found completely divided about three-quarters of an inch above the patella, with the proximal end retracted two and one-half inches. The lower uneven border of the tendon was trimmed off and the ends united by three mattress sutures of fine silver wire. The skin wound was closed by a subcutaneous suture of silkworm-gut, and the leg dressed in position of complete extension and encased in a plaster-of-Paris cast.

No elevation of temperature or rise of the pulse followed the operation. The cast was taken off on the tenth day and the skin suture removed. The wound had healed by primary union. Massage with passive and active movements of the joint were immediately commenced, and have been continued up to the present time. He can now completely extend the limb and walk without any discomfort.

Rupture of the quadriceps tendon, although not infrequent, is still of interest from several points of view. First, the question of diagnosis of this injury deserves mention. Many of the cases reported in the literature were at first mistaken for and treated as fractures of the patella. In the case here presented the patient was sent to the hospital with a diagnosis of a fracture of the patella. I have no doubt that in a considerable number of cases the exact nature of the injury is not recognized. It is difficult to see how the mistake could be made in a typical case, as the findings are characteristic—the hollow above the patella, which allows of direct palpation of the condyles and anterior surface of the femur, with a normal patella and complete loss of power of extension of the leg.

In those rare cases where there are abnormal cartilaginous or

bony growths in the ruptured ligament, as in the cases reported by Wunsch and Kohl, these deposits might easily be mistaken for the upper fragment of a fractured patella. Measurements of the patella on the injured side and comparison of the same with those of the opposite patella will show the nature of the injury.

The mechanism of rupture of the quadriceps tendon is a subject of considerable interest. In some cases the tendon has been found to be the seat of pathologic changes which were sufficient to explain why only a comparatively small amount of force was required to cause a complete rupture. In this connection may be mentioned the cases before referred to of Wunsch and Kohl, in which bony and cartilaginous growths were found in the tendon at the point of rupture. As these deposits were bilateral and situated some distance above the patella, there seems to be no doubt that they weakened the tendons and predisposed to a rupture. In most cases there has been no variation from the normal noted in these ruptured tendons. We must therefore assume that in the case of a normal tendon the tear occurs while the limb is in a peculiar position, in which the strain upon the tendon is greatly in excess of what it is ordinarily subjected to.

As regards the manner in which these injuries occur, Maydl, after a study of sixty-one cases collected from the literature, in fifty of which the mechanism was noted, concludes that there is no evidence to support the hypothesis that the rupture occurs in a "stretched" muscle through the action of antagonistic muscles. He considers that in the majority of cases rupture occurs in an attempt to prevent a threatened fall, as when one trips while running and suddenly throws himself backward in order to check the forward movement of the body. In rare cases a sudden powerful contraction of the quadriceps extensor, as in jumping, may cause a rupture of the tendon. In other cases sudden sharp adduction of the leg while it is partially extended with the quadriceps contracted may cause a laceration which begins at the outer border and extends toward the inner. In these cases the external lateral and the anterior crucial ligaments are also lacerated.

The question of treatment of this injury requires but brief consideration. In all cases when complete rupture of the tendon has occurred, opening of the joint, removal of the clots, and suture of the tendon are indicated. That this gives the best results is shown by the cases collected by Walker. In twenty-one cases treated by suture of the tendon, complete recovery followed in ninety per cent. In twenty-three cases of supposed rupture treated by other methods than suture, recovery more or less complete followed in seventy per cent. In Maydl's collection of forty cases treated by various methods, only sixty per cent recovered use of the limb.

In case the environment of the patient is such that there would be great risk of infection in opening the joint, or when for any other reason an operation is contraindicated, the leg should be dressed in complete extension for from four to six weeks. In addition, an effort should be made to approximate the ends of the tendon by use of adhesive strips, or by a figure-of-eight bandage. Later, massage and passive movements of the joints should be employed.

TYPHOID FEVER IN AN INFANT NINE MONTHS OLD; RECOVERY.

BY WM. P. NORTHRUP, M.D.,

Professor of Pediatrics in the University and Bellevue Hospitals, New York.

This case will be of especial interest to those who have followed an animated discussion started in the American Pediatric Society five years ago, and taken up elsewhere on occasions. The writer at that time, basing his statements on the records of the New York Foundling Hospital, argued that typhoid fever in patients under two years of life was rare. This statement was challenged by numerous persons, notably Chicago members of the Pediatric Society. Later the writer found that he had started a discussion in which all older physicians, all Chicago physicians, and many contemporaries had withdrawn to a separate camp, and were prepared to give battle, not omitting to rejoice over the coming victory. Let it be remembered that Chicago physicians at that time had good opportunities of studying typhoid, and had just passed through an experience with a formidable epidemic.

The writer was led to review his former arguments and determine exactly the position he was willing to take. Facts from hospitals had been given out before, and there was little to add to facts, except deductions, and these were now made and added. To these again were added what could be safely culled from literature. General writings, from lack of exactness on this particular subject (typhoid fever), are found to furnish but little convincing proof of anything.

The thesis, as stated on a second occasion, was as follows: "Typhoid fever is a disease to which there is little susceptibility in children under two years of age. In epidemics, children under two years of age, though naturally little susceptible, may, in the presence of an overwhelming poison (multiplied exposures), acquire typhoid fever."

This position was subsequently assailed with vigor by nearly all the society, excepting my two contemporaries, Rotch of Boston, and Holt of New York, who sustained the thesis.

The next step was the report of a well known epidemic in Stamford, Conn. The writer followed some cases in infants who accommodated themselves to the exception, as stated in the thesis. There were four patients under two years, all infected by poisoned milk from a single source. The first infant was under two years, and was infected in the epidemic. To be exact, it was thirteen months old, had fed upon milk which had infected its father and brother, and a hundred other inhabitants of the city. The disease was undoubtedly typhoid, having the characteristics of continued fever, prostration, and apathy, large spleen, and rose spots. The father recovered after intestinal hemorrhage, and the brother after a severe course with prolonged delirium. The infant also recovered.

The second infant was twenty-two months old, and died from pulmonary complications. Autopsy confirmed the diagnosis.

A third case was sixteen months old, and recovered.

A fourth was twenty-two months old, and recovered.

These are the only cases under two years in an extensive epidemic, with many deaths, including the physician with whom the writer visited the cases, and viewed the well from which the infection agent was supposed to have been derived. There were thus four cases under two years of age.

The thesis put forth on facts from institution records has been sustained by exact methods, by Lovet Morse, of Boston. He has applied the Widal serum test to cases of continued fever of doubtful origin, coming to dispensary in Boston. His conclusion, so far as a single Widal test is reliable, is that "typhoid fever in infants (under two years) is rare."

At the present moment, then, there are printed reasons enough in existence to warrant the writer in stating that the thesis is sustained.

Delafield once said: "There is nothing too irregular to be typhoid fever." That is quite true. Yet there is no diagnosis so often a misfit. In adults typhoid is named something else; in infants something else is named typhoid. Continued irregular fevers in infants and young children due to catarrhal enteritis are often first tried with quinine and then classed as typhoid.

The case which occasions this paper is the youngest undoubted case in the experience of the writer. It is that of typhoid fever in a female patient aged nine months. At the time of admission the father and two brothers were in the hospital with typhoid fever. The mother was not infected and nursed the baby at her breast. The infant had been crawling about the bed of its father, sick in his second week, and a brother sick seven weeks. This brother, who never came to

the hospital, was the first member of the family to have typhoid fever —five being sick in all.

Previous History.—Twelve days before admission a physician took the temperature and told the mother the baby had the "same sickness." For a week previous to that the mother said the child's passages were frequent and greenish. They were frequent and greenish on entrance to hospital. There is a history of continued fever, and diarrhea; no convulsions.

On admission the child was plump, pale, no marked prostration; tongue coated, whitish; temperature, 103° F. After an enema the child passed yellowish fecal matter, with considerable mucus and some rolled-up masses.

Symptoms and Course.—The abdomen was markedly distended, hard, tympanitic for two days, difficult to relieve. Turpentine stupes, high rectal enemata, and finally castor oil, were employed, with ultimate success.

Spleen, distinctly palpable, one and a half inches below free border of ribs; liver, one inch below free border.

Eruption: Characteristic rose spots, few in number, on abdomen and back. These appeared on the sixth day in hospital.

Cerebrum: The child was dull and stupid much of the time, though never impressing one as very sick.

Passages continued frequent, soft, containing mucus and greenish pultaceous masses for about ten days. These were little affected by treatment, and seemed to improve only when the disease with temperature began to wane. By the nineteenth day of the disease the temperature was returning to normal, and the spleen was markedly diminished; then it was that the last mucus disappeared from the passages; slight cough, no pronounced signs of bronchitis.

The temperature reached 103° F. daily for the first nine days, and gradually fell away to normal on the twelfth day after admission. From the time the family physician first took the temperature to the end of the fever in hospital was twenty-four days.

Complications.—Pustules on scalp and back of trunk.

Symptoms.—The most troublesome were diarrhea and tympanites.

Diagnosis.—This was confirmed on the following symptoms and signs: Continued fever, markedly enlarged (feelable) spleen, diarrhea and distention, rose spots, Widal serum test (twice). The blood examination was of interest. Repeated examinations showed no plasmodium malariæ, and no Widal reaction. Although the other cases from the same family showed a characteristic serum reaction, this infant's blood failed repeatedly to give the reaction. It was not till the twelfth day in hospital, and when the temperature had returned

to normal, that the Widal test confirmed the diagnosis. This was a perfectly satisfactory, prompt reaction with a dilute culture. To make assurance more assured, another test was made four days later; reaction positive and satisfactory. It may be added that the urine, drawn by catheter, had been twice cultivated, and no growth was reported. The last culture was on the day on which the Widal test was first reported positive.

Treatment.—Feeding of a nursling in typhoid fever naturally was most important. The mother came three times a day at first, and nursed the baby. Feedings were given of milk diluted with water and lime-water. The feedings seemed to disagree, as indicated by diarrhea with passage of mucus and curds. It was therefore thought best to feed wholly on modified milk.

The following feedings were furnished by the Walker-Gordon Milk Laboratory. The milk was ordered "modified" according to a written prescription. This added an exactness in feeding and a record of proportions found useful in this case. The first prescription was:

Fat	2 per cent.
Sugar	5 per cent.
Proteids	0.75 per cent.
Feedings	10 in number.
Amount in each	2 ounces.
Alkalinity	10 per cent.

Heated to 155° F. twenty minutes.

This was fairly borne, and the proportions were increased as follows:

Fat	3 per cent.
Sugar	6 per cent.
Proteids	1 per cent.

Otherwise the same.

Flatulence, mucus, and curds indicated that the ingredients were not well borne. The proportions were changed to those of the first prescription.

After several days the symptoms were relieved, and the prescription was changed again to the proportions in No. 2. From this point the ingredients were gradually increased to:

Fat	4 per cent.
Sugar	7 per cent.
Proteids	2 per cent.
Alkalinity	5 per cent.
Feedings	5 in number.
Amount in each	6 ounces.

Heated to 155° F.

The writer has seen six cases of undoubted typhoid fever in

patients of two years and under, viz., nine, thirteen, sixteen, twenty-two, and twenty-four months of age, and would conclude:

1. The diagnosis in all these cases was easily made on signs and symptoms characteristic of typhoid in adults.

2. The cases were all intimately associated with others in the family.

3. Skepticism should be encouraged concerning any diagnosis of typhoid fever in an infant (under two years of life) not intimately associated with other cases.

4. The most common mistakes arise from misnaming as typhoid the following diseases: grippe, subacute catarrhal enteritis, central pneumonia, and malaria.

An observation of Mr. Hafner, of Zurich, published in *Die Natur*, forms a curious contribution to medical geography. He finds that all the engineers and workmen on the Jungfrau railway who are obliged to remain a considerable time at altitudes of about 2600 meters above the sea level are liable to a disagreeable complaint. After eight or ten days they are seized with violent pains in several teeth on one side of the jaw, the gums and cheek on the same side becoming swollen. The teeth are very sensitive to pressure, so that mastication is extremely painful. These symptoms increase in severity for three days, and then gradually and entirely disappear. It seems to be purely a phenomenon of acclimatization, for all newcomers go through the complaint, and it appears never to recur.

The *Denver Medical Times* for March, 1900, in an editorial says: "No man has it in his power to do more good in the world than the sympathetic, skilful, and conscientious physician. He is admitted to the inner sanctuary of domestic life; he can heal or widen the breach between husband and wife that disordered nerves, financial trouble, or mental obliquity may often induce even among those who have the best intentions. He knows that when a woman's nerves have reached a certain tension her husband is a 'fiend incarnate.' He knows that when a man's immoralities have exhausted his life forces, clouded his brain, and hardened his heart, this man's wife becomes of all women most unattractive, and the neglect or abuse which she must endure reduces her to a physical condition which the physician is expected to remedy with medicine. He must hear the complaints of both with the patience of Job and the wisdom of Solomon; he must do what he can do and decline to pretend to do what he cannot do."

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE STUDY OF POISONING AND ITS BEARING ON IMMUNITY.

An almost universal expedient in snake-bite has been the application of a ligature above the seat of inoculation. This has been done for the purpose of preventing the poison from reaching by absorption the higher nerve centers. Some recent experiments by Czyhlarz and Donath, of Nothnagel's clinic, in Vienna, recently undertaken for determining the activity of poisons in different organs, have led to some results of great interest. Among these results is one that would attribute to the ligature a far greater importance as a factor in the production of passive immunity than those who employed it empirically could have imagined.

The course of these experiments was as follows: The hind legs of guinea-pigs were ligatured as far above the knee as possible so that a centripetal flow of blood and lymph was checked. Then immediately a certain quantity of strychnine was injected into the ligatured extremity—a quantity sufficient to produce death in from two to five minutes in the control animals. The point of injection was covered with collodion to prevent the oozing out of the poison. In from one to four hours after the injection the ligature was removed, and, what is surprising, it appears that all these animals, twelve in number, remained absolutely well and continued unaffected for weeks afterwards, although the control animals were killed immediately with the dose of strychnine injected. It became a question what alteration had occurred to prevent the fatal result. In none of the guinea-pigs did gangrene of the extremity occur, so no irreparable damage to the circulation was caused by the ligature. Neither had the application of the ligature prevented the power of resorption in the limb, as another series of experiments proved that animals died with the

characteristic convulsions of strychnine if the drug were injected prior to the removal of a ligature which had been applied for from three to four hours. What undoubtedly happened was that something had occurred to prevent the action of the poison in the ligatured leg, but how long it was necessary to keep the leg ligatured to secure this was not determined. One animal in which strychnine had been injected died half an hour after the ligature was removed, and in one in which the ligature was removed one hour after the injection the animal lived.

The inference from these experiments seems to be that the subcutaneous tissue, the musculature, and the blood and lymph remaining in the ligatured extremity had some influence in neutralizing the strychnine. Whether analogous conditions hold in regard to other poisons can only be determined by further experiments. The experiments of Besredka, whereby he succeeded in immunizing animals against a fatal dose of arsenous acid, led him to conclude that the leucocytes actually manufactured are anarsenine. That the human body under certain conditions possesses the power of neutralizing such powerful organic poisons as strychnine gives us a conception of the protective capacity of the organism far exceeding that which we have hitherto attained by a study of antitoxins.

EDITORIAL NOTES.

The Late Dr. Geo. E. Frothingham.

In the death of Dr. Geo. E. Frothingham, which occurred in Detroit April 24, the profession has sustained the loss of an eminent oculist. His contributions to ophthalmology and physiological optics have extended over many years. His connection with the University of Michigan made him well known to his younger professional brothers, by whom he was loved and respected. Dr. Frothingham had been in failing health for some time, and his demise was not entirely unexpected. He was an exceedingly hard worker in his own specialty, a man of strong convictions, and an ardent and indefatigable champion of professional honor.

Do Not Tap a Pleurisy.

A French writer, Mollard, calls attention to the evils resulting from evacuation of the serofibrinous exudate in pleurisy, the frequency with which tuberculosis follows thoracentesis being an argument against the routine puncture. This is in line with the practice of Murphy, in keeping the lung immovable by an injection of a neutral gas into the

pleural cavity. The atelectasis brought about by the exudate may undoubtedly favor reparative processes in the lung, and it is possible the fluid itself may possess some antituberculous properties. It is undoubtedly wise to ask the physician to hesitate before performing a thoracentesis unless actual mechanical obstruction to respiration is present.

Artificial Impregnation.

The French novel, in which the central theme of the story devolved upon an act of artificial impregnation by a syringe, seems to be finding an echo in some recent achievements of veterinary science. The artificial impregnation of mares is now becoming a common expedient through the encapsulation of the seminal fluid of the horse. It has been found that under proper precautions the spermatozoa have a long vitality, and that a capsule containing them can be used efficaciously. This is a suggestive experiment. To be the son of a gun was bad enough, but to acknowledge a capsule for a progenitor would soon be fatal to the pride of pedigree.

A Powerful Convert.

Those who oppose the use of tobacco have at last made a powerful convert to their opinions. The Emperor Menelek of Abyssinia has forbidden the use of tobacco throughout the limits of his Ethiopian empire. It has been contended by a recent writer on the subject that nearly all the bad effects attributed to tobacco really belong to alcohol, which smokers as a class consume in large quantities. With the followers of the Prophet, alcohol being already forbidden, it will be interesting to note the improvements to be attributed to this new form of abstinence.

The Decree of the Michigan Supreme Court.

The decree of the Supreme Court which passes upon the validity of the Michigan medical registration act will be received with much favor. It is now morally certain that a large number of quacks will be unable to register, and the State may hope at last to be purged to some extent of the abuses in this line from which it has long suffered.

ITEMS AND NOTES.

In India there occur annually 5,000,000 deaths from malaria.

Dr. Wm. Osler, who has been ill with la grippe, has recovered.

The American Proctological Society met in Washington on May 2 and 3.

A short time ago two yellow fever ships were quarantined at New York City.

Smallpox still continues its ravages in the lower part of the Province of Quebec.

Rock Island, Ill., is about to build a hospital the value of which will be $25,000.

The University Hospital, Ann Arbor, was recently burglarized to the extent of $200.

The Presbyterian Hospital of Chicago will receive $135,000 by the will of the late E. G. Cone.

Four fifths of all the garlic eaten in Europe is raised on the two African Islands Zanzibar and Pemba.

The Czar of Russia's army is the only one in Europe that can boast of female medical officers.

Dr. J. C. Da Costa has been elected Professor of the Practice of Clinical Surgery in the Jefferson Medical College.

Among the Frenchmen recently made Chevaliers of the Legion of Honor were Drs. Marmorek, Barr, and de Moteues.

At a recent meeting of the Philadelphia Bureau of Health a resolution was adopted making membranous croup a notifiable disease.

Inhabitants of South Africa are said to be particularly liable to acute pneumonia, caused by the fearful dust storms of that locality.

In London the candidacy of Professor Osler, of Baltimore, for the chair of medicine in the University of Edinburgh is looked upon with favor.

THE first International Congress of Professional Medicine and Medical Deontology will be held in Paris from the 23d to the 28th of July.

THE total number of medical students in the different medical schools of France for the present year is 8230, of whom 817 are foreigners.

NO case of plague has been reported at Honolulu since March 25, and it is estimated that nearly $2,000,000 has been spent in fighting the disease.

THE Board of Health of Lancaster, Pa., has formulated an ordinance imposing a penalty on persons expectorating in a public conveyance.

DIPHTHERIA is almost an unheard-of disease at Johannesburg. The reason for this is said to be that the elevation of this town is over 4000 feet.

THE statements that have been recently made in regard to the increase of insanity and suicide in the American army are entirely unsupported by facts.

FOUR thousand dollars has been appropriated by the Ontario government to assist municipalities in the erection of district sanatoria throughout the Province.

DRS. ROBERT F. WEIR and Wm. T. Bull have been appointed to succeed Dr. McBurney, who recently resigned as chief surgeon of Roosevelt Hospital, New York.

THE New York Assembly has passed a bill appropriating $1,000,000 for the construction of buildings, repairs, and improvements at the State hospitals for the insane.

IT is proposed to perpetuate the memory of the late Dr. Daniel G. Brinton by endowing in his name a professorship of American archeology and ethnology in the University of Pennsylvania.

Science of March 16 states that the Faculty of Medicine of Würzburg has awarded its Rinecke prize of one thousand marks and a silver medal to Prof. J. von Kries for his researches in physiology.

THE *Medical News* is authority for the statement that Mrs. Mary Baker G. Eddy, leader and founder of the "Christian Science" Church, is very ill at her home in Concord, N. H., with a cancerous affection.

THE Mississippi legislature has passed a law imposing a special tax upon physicians. In towns of 3000 or more inhabitants they are to pay $10 annually; in towns of less than 3000 inhabitants, $5; and in the country, $2.50.

THE town of Winchester, Va., will try to abate the pest of mosquitoes by applying coal oil to all the cesspools. An ordinance requiring all householders to treat their cesspools at definite intervals will be enforced by the police.

THE little city of Orea, in Sweden, owns and operates a nursery that brings it an annual income of $150,000, a sum that pays all the expenses of the municipality, including free schools for the children, and a free telephone system for the people.

A SHORT time ago a man in Humboldt, Kansas, attempted to open a tar barrel, striking one of the heads a heavy blow with an ax. An explosion followed, supposed to be from accumulated gas, and a piece of the barrel head was driven into his forehead, injuring him seriously.

DR. A. D. HARD, of Wentworth, South Dakota, a graduate of the Department of Medicine and Surgery of the University of Michigan, class of 1883, is said to be the first physician in the United States west of the Mississippi River to use an automobile regularly in country practice.

AN International Congress of Medical "Electrology and Radiology" is to be held at Paris, according to *Science* of March 16, from the 22d of July to the 1st of August. Professor Weiss, of the University of Paris, is president, and the general secretary is Professor Doner, University of Lille.

ON the 14th of April, at her home, Mount Forest, Ontario, Mrs. James Peter gave birth to three children, with another still unborn when the poor, suffering mother succumbed. One of the children, a little girl, was still-born, and the other two, said to be fine, healthy-looking boys, are still alive. In addition to the two infants, two other young children are left.

A UNION label on coffins, or no burial in Chicago cemeteries, is part of the latest labor programme. This, says a St. Louis contemporary, is an extension of power that only stops at the grave because it can get no further. This is a mercy for the unregenerate non-unionist, who otherwise would have to pay the penalty of being a free man in one world by being a vagabond in the next.

A SOCIETY has been formed under the name of the New York Genito-Urinary Society, Dr. Ramon Guiteras being president, Drs. Winfield Ayres and Otis. K. Newell vice-presidents, Dr. George W. Blanchard treasurer, Dr. A. D. Mabie secretary, and Mr. Samuel Bennett, 161 Garfield Place, Brooklyn, corresponding secretary and stenographer. Information as to terms of membership, etc., will be furnished by the last mentioned.

ACCORDING to the *Journal of the American Medical Association*, Chicago's "Christian scientists" are objecting to the teaching of physiology in the schools. They protested to the Chicago Board of Education at its meeting April 9 against it, against medical inspection of schools, and against the rules requiring vaccination. The reply of the board was to the effect that the children of "Christian scientists" would be governed by the same rules as were the children of the plain, common people.

THE *British Medical Journal* of March 31, 1900, says that the death-rate from disease in the forces in South Africa has been considerably lower than the rate in the American army in Cuba, but in both instances the most virulent enemy to soldiers has been typhoid fever. It persistently advocates boiling the water, and in South Africa it seems that this can be accomplished satisfactorily, as there the water can be cooled to almost ice-cold by being suspended in canvas water-bags or felt-lined water bottles in the open air, the dry atmosphere producing such rapid evaporation from the surface that the temperature is rapidly lowered.

ACCORDING to *Gaillard's Medical Journal* for March, Dr. A. Bloch, the French anthropologist, attacks the theory that thick lips mark sensuality, while thin and delicate lips denote spirituality, firmness, and elevated character. In a recent paper the scientist states that the shape, size, and color of the lips are purely race characteristics, and that in the hybrid peoples of Europe and America, where there has been such a general intermingling of races, a child may well inherit from not very remote ancestors lip forms that completely belie the actual character of the child, as indicated by the lip theory. Dr. Bloch's investigations satisfy him that really thick lips in the white races are always anomalies or freaks of nature.

THE *Journal of the American Medical Association*, quoting a French journal, says: "The overcrowding of the profession, which has been the theme of so many jeremiads, has been shown to be a myth as far as France is concerned, by some recent comparative statistical studies. They show that in 1847, when no one thought of complaining of any

overcrowding, there was one physician to each 2020 inhabitants; in 1876 there was one to each 2568; in 1896, one to each 2565. The physicians crowd to the large cities and centers of wealth, and forsake the smaller towns. In certain departments, like Haute-Savoie, there is but one physician to 4030 inhabitants. The overcrowding of the profession is therefore merely local congestion, while other regions suffer from the lack of medical attendance."

At the last meeting of the New York Historical Society Dr. Sydney H. Carney, Jr., read a paper on "The New York Medical Profession in 1800." The better to put his hearers into the proper mental attitude for what he had to say to them, Dr. Carney reminded them that at the time of which he was speaking, peach, plum, and pear trees flourished in Madison Square, and Babylonian maples and sycamore trees waved their branches as they had done for generations in City Hall Park. There has been some speculation among the curious as to the prevalence of gripes at bedtime among New Yorkers of a hundred years ago. The remedy for this complaint prescribed by the physicians was nutmeg and brandy and the yolk of an egg, to be taken before going to bed. For apoplexy, salt and cold water were to be used, whereupon the patient was "immediately to come to himself." A toothache remedy, efficacious always with one exception in the practice of one physician, was to crush a ladybug between the thumb and forefinger and then to rub the finger on the gum and tooth. Freshly crushed bugs were recommended. For the bite of a mad dog the prescription was an ounce of the jawbone of the dog, some colt's tongue, and a scruple of verdigris, that taken from the coppers of George I. and George II. being preferred, of which compound a teaspoonful a day was to be taken. If that failed to cure, 180 grains of verdigris and half an ounce of calomel was to be given in one dose by a physician in person. If this still failed, four grains of pure opium was given to the patient. This last was a secret remedy so successful that early in the century the State legislature bought the secret for $1000. For a visit the fee charged was $1, for a visit and a dose $1.25. Pills were 12 cents. Doctors got $1 a mile for going out of town. It cost $3 to get one to Brooklyn, and $10 to have one visit Staten Island. For bleeding a charge of from $1 to $5 was made. Tadpoles figured in the regimen of that day to such an extent that it is said the people of Vermont, in a season of scarcity, almost fattened on them. And one of New York's famous physicians spent a part of his time in the study of the alimentary qualities of these ti bits.

NEW PUBLICATIONS.

DISEASES OF THE SKIN.

This well known text-book has since 1883 been a candidate for public favor, and since that time five editions have been issued. The last edition was issued only two years ago, but the authors have availed themselves of the opportunity of revising their work thoroughly and bringing their subjects thoroughly up to date. The work may be regarded as a standard treatise upon dermatology, giving information which can be trusted to be modern and reliable. New chapters in the present work appear in Porokeratosis and Blastomycetic Dermatitis, and most of the subjects treated of have been thoroughly or in part revised. The work will prove a manual of the greatest value to students and practitioners.

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. By James Nevins Hyde, A.M., M.D., and Frank Hugh Montgomery, M.D. Fifth and Revised Edition. Illustrated with 111 Engravings and 24 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co., 1900.

PROGRESSIVE MEDICINE.

The narrative of medical progress is continued in the new number of this excellent quarterly digest. The progressive physician will find this method of keeping abreast of modern advances in all departments of medicine one which is as satisfactory to the gratification of his mental aspirations as it is economical in the expenditure of nervous energy. The new volume is an interesting one and will maintain the reputation of the series.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Assisted by Charles Adams Holder, M.D. Vol. I, March, 1900: Surgery of the Head, Neck, and Chest; Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza; Diseases of Children; Pathology; Laryngology and Rhinology; Otology. Philadelphia and New York: Lea Brothers & Co., 1900.

LEA'S SERIES OF POCKET TEXT-BOOKS.

Another number of these compact and admirable text-books is presented in the manual of gynecology by Dr. Crockett. It completely traverses the subject. The description of pathological conditions is concise and to the point, and the methods of treatment are carefully described. The work will be found one of the best of the series.

Gynecology. A Manual for Students and Practitioners. By Montgomery A. Crockett, M.D. Series Edited by Bern B. Gallaudet, M.D. Illustrated with One Hundred and Seven Engravings. Philadelphia and New York: Lea Brothers & Co.

THE ESSENTIALS OF HEMATOLOGY.

This is a concise statement of the principles and technique governing the new science of hematology. It is copiously illustrated, and will prove a useful pamphlet for the general practitioner's perusal.

The Essentials of Hematology. A Practical Guide to the Clinical Examination of the Blood for Diagnostic Purposes. Illustrated. Published by the Palisade Manufacturing Co., Yonkers, N. Y.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Gunshot Wounds in the Spanish-American War.

W. C. Borden (*New York Medical Journal*, April 14, 1900) in a paper on this subject draws the following conclusions relative to the surgical methods employed:

1. That aseptic and antiseptic methods have been the greatest factors in reducing post-traumatic complications and the mortality of the wounded.

2. That excellent results are obtained by dressing wounds with the first-aid packet or other occlusive dressing, and by packing lacerated wounds with iodoform gauze and leaving them undisturbed until they can be attended to with aseptic precautions.

3. That bullets which remain in the tissues usually give rise sooner or later to symptoms of discomfort or disability, and that, in consequence, all bullets should be removed, if possible, but the removal should be deferred until aseptic conditions are available.

4. That the Roentgen ray is of the greatest value in locating bullets and determining the condition of fractures.

5. That under asepsis there should be no hesitancy in employing operative interference in compound fractures where there is irreducible displacement of bone, or where the Roentgen ray shows a condition of fragmentation liable to produce impairment of function; and that all septic wounds and fractures should be treated by thorough antiseptic methods.

6. That surgical asepsis is practically impossible on the field or at the field hospital.

7. That operative interference on the field or at the field hospital should be restricted to operations imperatively demanded to save life or to decrease the probability of death where transportation without operation would be more dangerous than the septic infection liable to occur from immediate operation under unfavorable conditions.

Local vs. General Anesthesia.

In a leading contribution to the *Berliner Klinische Wochenschrift* of March 26, 1900, C. L. Schleich, the originator of the "infiltration method," concludes in favor of local anesthesia.

Of all forms of limited anesthesia, the infiltration method, which Mikulicz pronounces "absolutely safe and superior to all other modes of local anesthesia," is the preferable one. The procedure is based upon the demonstrated fact that by the addition of saline solution a much smaller dose of anesthetic is required than heretofore in use. In fact, a 0.2-per-cent solution of chloride is of itself sufficient to suspend nervous conduction, and no more cocaine, eucaine, nirvanine, etc., should be used than is absolutely required to render the infiltration painless.

Schleich advises to begin the use of his method in cases of cutaneous or subcutaneous surgery—removal of small tumors, plastic operations, stitching of wounds, etc. After anesthetizing a small field with the chloride of ethylene spray, injection should be made *into*, not *under*, the skin, and from this vantage point the whole cutaneous and subcutaneous field flooded with the solution, producing in fact an artificial edema. Infiltration of the skin itself (infiltration wheals) need not be carried beyond the proposed line of incision. If we bear in mind to cut or burn only where infiltrated, and to infiltrate only where we are to operate, we cannot but meet with success. Also remember that fully seventy-five per cent of deaths under the general anesthetic occur in seemingly healthy individuals and during trifling operations. Not only minor surgery, but laparotomies, gastroenterostomies, herniotomies, and amputations of the thigh have been performed under infiltration anesthesia. Cases accompanied by inflammation of the skin should be infiltrated carefully from the periphery, through absolutely normal tissues. Considerable advantage may be derived from the use of chloride of ethylene spray in the cutaneous wound, and before penetration into more deeply situated inflammatory foci (buboes, adenitis, etc.).

Some operations of course are unamenable to local anesthesia, but in all cases inefficiency of the previously attempted infiltration should form a criterion for the necessity of a general anesthetic.

A Case of Pneumotomy on Account of Foreign Body.

A. Arnolds reported, in the *Grenzgebiete der Medicin und Chirurgie* (abstract, *Cent. für Innere Medicin*, 1900, No. 14), a case in which the foreign body—a false tooth with partly metallic, hook-shaped projections and sharp angles—lay, after the first severe dyspnea and attacks of coughing which lasted for five days, for a period of two months without causing any notable reaction symptoms, at the level of the seventh rib, five centimeters from the middle line, and on the back distant ten centimeters from the vertebral spines (the position

calculated with the help of the Roentgen rays). The first operation consisted of a resection of the sixth, seventh, eighth, and ninth ribs; an artificial adhesive pleurisy induced by means of iodoform gauze tampon and chloride of zinc paste. After three weeks the first puncture of the lung was made, and the foreign body could be felt at the point indicated with a graduated needle. It was necessary to interrupt the operation on account of pulsating bright-red hemorrhage. After an interruption of two weeks a second operation was undertaken. In this a sound introduced into a transversely open bronchus impinged upon a hard body, but this procedure also was interrupted on account of hemorrhage. About four hours after the operation there followed a sudden severe attack of coughing, evidently as a direct result of the operation, with sudden expectoration of the foreign body, the tooth having been firmly fixed in the bronchus. The patient six months after the day of the first operation had completely recovered.

In all, there have been reported up to this time twelve cases of pneumotomy on account of foreign body. Among these there were four fatal cases, three cases of improvement, three recoveries, and two in which the result is unknown.

Some Pathologic and Clinical Phases of Gall-stones.

A. H. Cardier (*American Journal of Surgery and Gynecology*, April, 1900) draws from his experience the following deductions:

1. Cholelithiasis is of frequent occurrence and usually gives manifest symptoms, either severe or obscure.

2. Cholesterine as a gall-stone producing agent must be present in an abnormal quantity.

3 Cholesterine is in a great measure a product resulting from the destruction and disintegration of the epithelium of biliary ducts and gall-bladder.

4. Bilirubin calcium, an insoluble compound, the outgrowth of the union of bilirubin and the lime salts, forms the nucleus of almost all the stones formed in gall bladders.

5. Jaundice, ptomaine poisoning, and suppuration are late symptoms of cholelithiasis.

6. Dyspeptic symptoms, swarthy skin, uneasiness in region of gall-bladder ("congestion of liver"), and loss of weight are some of the remote and local outgrowths of the presence of gall-stones.

7. Inflammatory diseases of the duodenum and bile passages are the most direct causative factors in the production of gall-stones.

8. Some cases get well without any assistance from the physician

or surgeon, yet the progress of the cases that terminate favorably without surgery can be greatly assisted by the physician.

9. The surgery is especially difficult, and the inexperienced should not undertake to do it.

10. A ball-valve stone usually continues giving rise to symptoms until removed by surgery.

11. Stones in gall bladder producing septic symptoms should be removed.

On the Formation of an Artificial Anus.

Robert F. Weir (*Medical Record*, April 21, 1900), after reviewing the various operations for the formation of artificial ani, says:

1. That an artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification.

2. That overslipping of feces may be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened in the wound or dropped into the abdominal cavity.

3. That continence of the abnormal outlet is aided by muscle separation (Maydl) or by muscle bridging (von Hacker and Hartmann), or by the use of inflatable or molded plugs or other apparatus.

4. It is only, however, to be satisfactorily effected (though larger experience in this is desirable) by an extra-abdominal iliac outlet (Witzel's iliac colostomy), to be made by opening the bowel outside and behind the iliac spine. In this procedure the bowel is compressed between the edge of the bony pelvis and the skin.

Many other methods have been proposed. Some, like Witzel, have made the outlet externally, but by gouging a hole through the iliac bone. Other schemes have been tried and have failed. A few are so unsurgical that they have fallen still-born. Perhaps some have yet promise, and may in time, their value not now being recognized, develop into methods of note.

General Anesthesia.

Schleich (*Berl. Klin. Woch.*, 1900, No. 13, p. 271) says that for such cases as are not amenable to circumscribed anesthesia, and in which general narcosis becomes imperative, the question arises as to which is the preferable anesthetic. Neither increased chemical purity nor the introduction of new compounds has solved the problem. The warfare between chloroform and ether still merrily proceeds. Experience, however, teaches that if the boiling point of an ethereal mixture be reduced so as to approximate it to the temperature of the patient,

we may expect a milder, and, so to speak, more physiological anesthesia. This mode of procedure allows of an artificial individualization of the narcotic, and statistics of over five thousand cases without untoward manifestations demonstrate that Schleich's temperated mixtures are the best:

Boiling point	38 deg.	40 deg.	42 deg.
Chloride of ethylene	2 "	1.5 "	0.5 "
Chloroform	4 "	4 "	4 "
Ether, sulphuric	12 "	12 "	12 "

Inflammatory Strictures of the Sigmoid Flexure.

Rotter, at a recent meeting of the Berlin Society of Surgeons (*Medical Press and Circular*, March 21, 1900), reported four cases of stricture of the sigmoid flexure—one in a woman, three in men. All four presented symptoms of ileus, of which, as they came under observation too late for treatment, they all died. The seat of the disease was the subserous tissue; here suppuration had become established — one from attachment of the perforated vermiform appendix to the bowel, one from so-called false diverticula of the mucous membrane. Fistulous passages were established around the intestines, which had caused contraction of the connective tissue, and led to stenoses, which in both instances led to an appearance of a tumor. It seemed as if this was a favorite mode of origin for strictures of the sigmoid flexure.

MEDICINE.

The Typhoid Bacillus and Typhoid Fever.

P. Horton Smith (*Lancet*, March 24, 1900) in an article under this heading says that if we consider the facts which have been brought forward in connection with the bacteriology of an ordinary case of typhoid fever, we obtain the following data: The typhoid bacillus can always be found in the stools in the early periods of the disease. It can also be demonstrated always in Peyer's patches and the mesenteric glands. It does not, however, remain limited to these situations, but very soon and in all cases passes into the blood (from which it can be very often isolated), and by means of which it is distributed to the most diverse organs. Thus it can always be found in the spleen and in the liver. It gives rise in the skin to the typical eruption. It is in most cases present in the marrow of the bone and in the bile. It is frequently present in the urine, and is not uncommonly found in the kidneys. Occasionally, also, it may be detected in the lungs and sometimes in other organs.

And now we may ask, says the writer, How do these facts bear upon our conception of typhoid fever? The answer is clear. Any conception of the disease which regards it merely as affecting the alimentary canal only can no longer be maintained. On the contrary, so far from considering it as an intestinal disease pure and simple, we should rather look upon it as a modified form of septicemia. It is septicemia in that always and in all cases the bacilli pass into the blood and then into the various organs, and in that the symptoms, excepting as far as they are intestinal, are referable to the poisons there produced. It is a modified form, however, in that in nearly all cases there is a definite local and primary disease whence the secondary dissemination of the microorganism takes place.

Looked at in this way we have a ready explanation of the fact that the severity of the disease bears no relation to the number and character of the intestinal lesions. For just as a fatal septicemia may originate in a scratch, so one or two small typhoid ulcers may be quite sufficient to allow the entry of the microorganism and the development of the disease.

Pneumothorax.

Pneumothorax is, according to J. L. Morse (*American Journal of the Medical Sciences*, May, 1900), an uncommon condition. At least seventy per cent, and probably eighty-five per cent, of the cases of pneumothorax are tubercular. The prognosis is good when it is due to trauma; it is fair when the pneumothorax is secondary to abscess of the lung. The results of excision of the ribs in these cases are very encouraging. Tubercular pneumothorax is much more common in men than in women; it is most frequent in the third decade, and is about twice as frequent on the left as on the right side. The onset is acute in rather less than half the cases. Sudden pain and dyspnea are the most common initial symptoms. The pneumothorax may be the first symptom of tuberculosis noted. Displacement of the heart always occurs, being more marked in the left-sided cases. The pneumothorax is usually complicated by the presence of fluid, but may be simple. Air is rarely present alone in cases living more than a week. The fluid is more often purulent than serous. Recovery from the pneumothorax may occur in about fifteen per cent of all cases. The cases which recover are practically all serous; they usually die later, however, from pulmonary tuberculosis. The pneumothorax is the direct cause of death in sixty per cent. Eighty per cent of all cases die in less than a year, and only ten per cent live over five years. The prognosis is worse in right-sided than in left-

sided and in purulent than in serous pneumothorax; it is worse in women than in men. Surgical intervention is at least worthy of consideration in the purulent cases. Patients with pneumothorax are sometimes able to be up and about and even to do manual labor.

Enterocolitis in Children.

Lyon (*Rev. de Thérap.*, March 15, 1900, p. 185) recommends the following treatment: With nursing babies the feedings should be spaced; to bottle-fed children only sterilized milk should be given, or better still one tablespoonful of boiled water every thirty minutes. Weaned children should be put upon an exclusive milk diet. If the milk is badly supported we may resort for two or more days to infusions of tea, oatmeal gruel beaten up with an egg, and chicken broth. Abdominal pain should be treated with hot fomentations, poultices, ten-minute baths at 95°. To reduce the temperature when above 102°, substitute five-minute baths at 85°, and even 75°, every four hours.

Intestinal lavage (three grains of borate of sodium in a quart of boiled water) is the best means of securing intestinal antisepsis, but this is liable to cause pains and should be used with care. Not more than four hundred grammes (one pint) should be introduced; moreover, it is advisable to use lavage only after baths and hydric diet have reduced the intensity of inflammatory process.

Rectal tenesmus may be treated with laudanum enemata (one to three drops, according to age, in a tablespoonful of water at 100° F.), or antipyrin, one to two grains, exhibited three or four times a day in alkaline solution. In children over three years old we may use Dover's powder.

Where stools are putrid, use calomel in small doses for a child of one year (one-sixth to one-third of a grain in three or four powders, one to be given every hour). For a two-year-old, half a grain exhibited in the same manner.

When convalescing, pay strict attention to diet — no greens, no wine. Gruel, milk soups, tapioca in beef tea, sterilized milk, soft-boiled eggs, creams, brains, sweetbreads, fresh fish, are allowed.

The Diet in Dilatation of the Stomach.

Albu (*Deutsche Med. Woch.*, No. 11, 1900, p. 180) deprecates the practice, which has been set down first by von Swieten, and then faithfully recommended by various authorities and taken in by the profession at large, of keeping patients with dilated stomach on dry diet. Von Mering has demonstrated that the healthy gastric surface is possessed of a limited power of absorption, while Moritz, on the

other hand, has shown that fluid food leaves the stomach sooner than soft diet; and again, mushy food enters the intestinal tract earlier than solid diet. The whole question of diet in gastrectasia therefore hinges upon the condition of the gastric motor functions, and should be regulated not according to the existing anatomical lesion, but to the derangement of physiological efficiency. It seems, therefore, indicated to substitute, instead of the irrational dry diet, such a line of foods as will pass in the quickest, easiest, and most complete manner into the intestinal tract, as had been previously recommended by Liebermeister, Pick, Fleiner, and Kussmaul. The possible objection that fluid diet is to be deprecated on account of its reduced nutritive value holds good for water and thin soups. Milk, however, offers an ideal means of nutrition, and should be used in all possible combinations, especially with eggs and some of the artificial albumins (nutrose, plasmon, etc.), which, to the advantage of easy solubility, join that of being capable of intestinal absorption. The finer vegetables — spinach, green peas and carrots in purée form, asparagus, cauliflower, baked apples—are to be recommended. Meat should be finely chopped. Calf-brains and sweetbreads, fowl (excepting geese), and white dry fish meats may be tried. Avoid beef, pork, and game. Of pastry, nothing but light cakes and rusks should be allowed. The necessity of toasting bread hinges upon the dry diet fallacy and may be disregarded. Butter should be used in small quantities (not over one ounce a day). It may be advisable to follow thorough lavage of the stomach with the ingestion through the stomach-tube of an appropriate nutrient mixture.

The Excretion of Urea by the Skin in Health.

The skin in health, according to C. C. Easterbrook (*Scottish Medical and Surgical Journal*, February, 1900), appears to have greater potentialities of urea excretion than was generally supposed. Waymouth Reid estimated the amount of nitrogen eliminated by the skin in health as 4.7 per cent of that by the urine.

Easterbrook describes in this paper a series of experiments conducted upon himself which tend to prove that the amount of urea excreted by the healthy skin should be taken into consideration in estimating the nitrogenous metabolism of the body. He first estimated the daily excretion of urinary urea by himself on a fixed diet, and for a period of time during which his body weight remained constant. He observed that there was a marked fall in the urinary urea after exercise accompanied by free perspiration, and that there was a rise in the amount in cold and damp weather, when the sweat glands

were much less active. The facts that more urea is formed in the body during exercise than in rest, and that in the former condition less is got rid of by the urine, left two possible explanations—namely, that the excess of urea was being eliminated either by the bowels or by the skin. After a careful examination of the feces on a fixed diet, he found that for practical purposes the slight trace of urea which was eliminated by the bowels might be neglected. On examining the perspiration produced by violent exercise, by wiping off the sweat with a clean rag, which was immersed in distilled water and the water tested, it was found that the water gave the various tests for urea most readily, and that even in ordinary "insensible" perspiration a trace of urea could be detected. The total amount of urea excreted by the skin was not ascertained.

Disinfection by Formaldehyde.

Gorini (*Il Policlinico*, March 1, 1900) has made a series of experiments on the disinfection of surroundings by means of formaldehyde. The author found it a particularly useful disinfectant for large unfurnished rooms or places with a considerable unbroken surface. It is not advisable where there is much furniture or many crevices, owing to its small penetrating power. It is useful where the infective material is likely to be widely distributed. As to the dosage, good results were obtained by two grammes of formaldehyde to the cubic centimeter, used for twenty-four hours. The organism chosen as a test was the staphylococcus aureus.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Vaginal Hysterectomy.

Byron Robinson (*American Journal of Surgery and Gynecology*, April, 1900) says that vaginal hysterectomy may be limited by the capacity of the tumor passing freely the pelvic brim. All tumors which lie in the lesser pelvis are proper subjects for vaginal operations. Myomata much larger than will pass the pelvic brim can be extirpated *per vaginam*, because such tumors grow by unfolding the ligamentum latum; said extirpation can be performed by continually fragmenting the tumor from the center. It is like reduction of a dislocation—

return it by the route through which it escaped. The development of the genital tumor prepared the genital arteries, the uterus, ovaries, and oviducts to aid thoroughly elongation, which enables the operator to safely stretch these. The gynecologist who frequently performs celiotomy by the abdominal method prefers the abdominal route from ease and facility of rapid execution. But such grounds are insufficient when the advantages and safety and subsequent utility to the patient preponderate in vaginal celiotomy. The limitations of vaginal hysterectomy depend on the relation of the size of the lesser bony pelvis to the tumor, and not on the relations of the size of the vagina and vulva to the tumor. Naturally it is more convenient to perform vaginal hysterectomy in multiparæ, but also the vaginæ of nulliparæ can be distended or incised to accommodate the size of the extirpating tumor with but slight danger or remote damage to the subject. It may be claimed that though one fail in vaginal hysterectomy and be compelled to resort to suprapubic incision on account of the size of the tumor, yet the surgical interference through the vagina will facilitate and enable rapid execution while working in the dangerous area of the enteron.

On the Hemolytic Action of Snake Toxins and Toxic Sera.

From a number of experiments made by J. W. W. Stephen (*Journal of Pathology and Bacteriology*, February, 1900) on the hemolytic action of snake toxins and toxic sera, the author draws the following conclusions:

1. That an antitoxic serum can act upon toxins other than, but allied to, that used in the preparation of the serum.

2. That the hemolytic constituents of snake toxins, and hence snake toxins as a class, are not identical.

3. That against a minimum lethal dose of daboia toxin 0.5 cubic centimeter of Calmette's antivenom has very little action.

4. That the antihemolytic properties of antivenomous sera must be increased, in order to afford any efficient protective serum, *e.g.*, against Pseudechis toxin or daboia toxin.

On the Bacteriology of a Case of Progressive Portal Cirrhosis.

From the study of a case of progressive portal cirrhosis, M. E. Abbott (*Journal of Pathology and Bacteriology*, February, 1900) has drawn the following conclusions:

The bacterium coli can, when first cultivated outside the body,

appear in the form of a minute diplococcus, which assumes in subcultures the recognized morphology of this bacillus.

When cultivated for some time on the ascitic fluid these diplococcoid forms may become fixed, refusing in our hands to revert wholly to type.

The action of the body fluids would thus seem to be one agency in the production of this alteration in form.

As the bacterium coli can appear in cultures as a minute diplococcoid body, it would seem probable that the minute diplococci seen in such numbers in the liver cells are the altered forms of this (and possibly also of other) bacteria.

THERAPEUTICS.

Pyrogallol.

Pyrogallol has already been found of value in superficial tubercular ulcerations of the skin, lupus, etc., and Veiel (*Arch. f. Dermat. u. Syphil.*, xlii and xliv, Festschrift) now recommends it in the more deeply seated processes of this nature as well. The method employed consists in the preliminary destruction of the tissues through the use of a ten-per-cent pyrogallol-vaselin ointment, which is applied for a period of from three to five days, subsequent healing being then encouraged by a weak one-half- to two-per-cent application of the same preparation. The author reports on the treatment in this way of (1) deep cutaneous tubercular lesions, involving even the tender sheaths; (2) tubercular lymph glands; (3) tubercular osteitis.

In the first class of cases the results were the best, and in the author's opinion excel anything to be achieved by surgical measures. The only drawback is the length of time required for cure.

In tubercular glands of not too long standing and not involving the deeper structures, the results were excellent, especially from a cosmetic standpoint. In cases, however, of abscess formation with deep fistulæ, or where induration and calcification had taken place, the treatment proved futile and the scalpel and curette had to be employed. In bony tuberculosis the applications proved of value in the more superficial processes, and especially were of service in operation cases by insuring the formation of firm, fibrous cicatrices.

The author ascribes this beneficial action of the pyrogallol in the first place to some directly specific effect (perhaps the absorption of oxygen) on the proliferation of the bacilli, and in the second to the freedom with which the granulations are destroyed and free drainage

provided for the secretions. In view of the possibility of its causing albuminuria, hematuria, etc., the urine of patients using pyrogallol should be kept under daily observation.

Ichthyol in Relation to its Absorbability by the Skin.

Ichthyol in relation to its absorbability by the skin has been the subject of an extensive and carefully conducted series of experiments by Drs. Cornelius Beck and Bela von Fenyvessy (*Archiv Internat. de Pharmacodyn. et de Thérap.*, vi, Nos. 1 and 2, 1899), of the Pharmacological Institute of the Budapest University. The experiments were carried out with dogs, the nitrogen and sulphur in the urine being estimated daily. The results obtained by the authors are stated as follows:

1. Ichthyol is absorbed by the normal skin of the dog; an evidence of the absorption is afforded by the increase of sulphur in the urine. The increase is effected by oxidized as well as unoxidized sulphur, and by each to equal extent.

2. Whether the metabolism resulting from the cutaneous application of ichthyol is influenced in the same sense that Zuelzer and Helmers have found to follow the internal administration of ichthyol in human beings, the authors could not decide.

3. From a physiological and therapeutic view the investigations have led to the important result that the skin appears to be penetrable to such substances as are readily soluble in water and in fat; whereby these substances are enabled not only to act upon the deeper cutaneous layers, but are also able to exert effects in distant parts of the body.

Treatment of Gonorrheal Epididymitis with Salicylates.

Bettmann (*Munch. Med. Woch.*, No. 38, 1899) treats this affection with a mixture of one part of pure methyl salicylate and two parts of olive oil applied to the scrotum and protected by gutta-percha paper and a suspensory bandage. The dressings are changed every two hours, and that the salicylic acid is absorbed is proven by the urine showing reaction of the salicylates after the application with the preparation. The objective course of epididymitis is not markedly influenced by this treatment, but there is a prompt relief from pain.

Painting with Formalin in the Sweating of Phthisis.

Dr. H. Hirschfield (*Medical Press and Circular*, April 11, 1900) covers the patient with a coat of formalin, protecting the nostrils with plugs of lint soaked in turpentine. In this way no harm is done to the

respiratory organs. In the one hundred cases treated by Dr. Hirschfield there were no failures, although one half of the cases were such as had derived no benefit from antihydrotics. In some cases a single painting was sufficient to prevent a return of the sweating for some weeks. Others required two applications, and in three the painting had to be done three times before a lasting success was effected. No physical effect was produced on the skin except a slight scaliness, and in one case a mild urticaria and two slight erosions.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Use of the Angiotribe.

J. Riddle Goffe (*Boston Medical and Surgical Journal*, April 12, 1900) from his experience with this instrument arrives at the following conclusions:

1. The superiority of this method of controlling the blood-vessels over the former method of applying forceps becomes apparent at once. By the former method forceps had to be left in place as they were applied one after the other in the process of the operation. These filled the vagina more or less, and impeded the progress of work (vaginal hysterectomy). In the use of the angiotribe, on the contrary, more and more room is gained with each application.

2. The handles of the forceps protruding from the vagina were a great source of annoyance and discomfort to the patient. Moreover, the forceps had to be removed at the end of thirty-six or forty-eight hours. This was a great annoyance to the patient, and in a certain proportion of cases hemorrhage occurred from the tissue adhering to the forceps, and being torn away as they were withdrawn. After the use of the angiotribe none of these disturbances arise; convalescence is smooth and comfortable. Indeed, Goffe's experience has been that there is very much less pain after using the angiotribe than by either the old forceps application or in the use of ligatures.

3. It is superior to ligatures in two respects: it is more easily and quickly applied, and it is attended by less discharge during convalescence, whether the ligature used is catgut or silk.

The above conclusions correspond almost exactly with the reporter's experience as noted in a paper published in The Medical Age of January 25, 1900. Although only five cases are there cited, Goffe has used the instrument in a considerable number of cases of broad-liga-

ment and pelvic surgery, and he is still of the opinion that when properly employed in suitable cases the angiotribe is a distinct addition to the surgeon's armamentarium.

Post-mortem Forceps Delivery.

Cases in which living children have been extracted by forceps after death of the mother are extremely scarce, since Fleischmann, of Budapest (*Centralbl. f. Gynäk.*, 1900, No. 4), has only found record of two cases, one published by Henricius in *Centralbl. f. Gynäk.*, 1883, No. 1, and the other by Piskacek in *Wien. Klin. Woch.*, 1888, No. 7. In the first instance the mother died during childbirth of rupture of the aorta, and Henricius succeeded in extracting a living male child. In Piskacek's case, the woman, twenty-eight years old, a kyphoscoliotic secundipara, suffering from dyspnea, cardiac hypertrophy, hydrothorax, hydropericardium, and edema of the lungs, died suddenly during childbirth. The child, extracted with forceps, was in an asphyxial condition, but revived, and died after thirty-six hours.

Fleischmann reports the third case on record—edema of legs, rigid os, later on dyspnea. On introduction of first blade of forceps in reclining posture there was collapse, suspended respiration, and soon thereafter the heart ceased beating. Attempts at revival were utterly unsuccessful. In the course of ten minutes the second blade was introduced, articulated, and one traction succeeded in bringing a full-grown asphyxiated female child, which revived and remained alive. Several urinalyses conducted at and after the seventh month of pregnancy failed to show anything abnormal. Post-mortem examination disclosed endarteritis, bicuspid and aortic insufficiency, and fatty degeneration of the heart.

Pain as a Pathognomonic Symptom of Ectopic Pregnancy.

Coe contributes an interesting article to the history of ectopic gestation (*Medical News*, April 21, 1900), which he summarizes as follows: Pain alone, when not accompanied by a clear history of menstrual irregularity, symptoms of pregnancy, and the presence of a tumor at the side of the uterus or in Douglas's pouch, known to be of recent development, is pathognomonic of extra-uterine pregnancy only under certain conditions, viz., the pain is of a sharp colicky character, distinctly localized on one side, attended with faintness more or less marked, and is usually followed by intervals of hours or days of complete remission. The pulse is accelerated during the attack, but there is no rise of temperature. The latter is an important symptom distinguishing ectopic from inflammatory conditions.

The violent tearing pain attending intraperitoneal rupture is accompanied by the unmistakable evidence of internal hemorrhage. In extraperitoneal rupture the symptoms vary in severity according to the amount of blood lost, but soon subside, being succeeded by the usual evidence of pressure resulting from a mass in the folds of the broad ligament which displaces the pelvic organs. A persistent pain following the acute attack may indicate localized peritonitis.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Radical Treatment of Follicular Tonsillitis.

In the *Laryngoscope* (vol. viii, No. 4,-April, 1900) Dr. Goldstein, of St. Louis, offers in a short article some valuable suggestions regarding the treatment of this troublesome affection, with a view to promoting prompt resolution. He combines active local treatment with suitable systemic medication. As the cause of infection can be traced directly to the tonsillar crypts with their contents of food detritus, micro-organisms, and pus, he rationally concludes that removal of the cause by prompt evacuation and cleansing of these follicles offers the best means of affording a speedy cure. With a specially designed small dull-edged spoon on a curved shank each crypt or follicle is thoroughly scooped out and cleansed. Into each cleansed follicle a small curved applicator, well armed with a small tuft of cotton saturated with pure guaiacol, is carefully introduced, care being taken not to spread the medication over the surface of the tonsil, but to pass it directly into the crypt. He has used ten-per-cent protargol solution, saturated trichloracetic acid solution, and Loeffler's solution in a similar way with equally good results.

These applications are to be made at intervals of eight hours, and if the cases are seen early two or three applications effect a cure. The following gargle completes the local treatment:

℞ Liq. ferri chloridi..... ʒ j.
Glycerini..... ʒ j.

M. S.: Teaspoonful in a glass of water. Gargle every two hours.

In addition to the local treatment he lays great stress on three therapeutic factors: (1) A brisk purge, produced by a saline draught, such as magnesium citrate; (2) a good sweat, as induced by pilocarpine hydrochlorate $\frac{1}{12}$ to $\frac{1}{8}$ grain, followed by wrapping the patient in blankets in bed; (3) thorough saturation of the system with sodium benzoate and sodium salicylate.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Cerebral Complications Caused by Extension from the Nose.

Robert C. Craig, in the *New York Medical Journal* of March 24, 1900, emphasizes anew the close connection between the accessory cavities of the nose and the cerebral meninges and the danger of infection by extension, citing several cases in illustration. Severe headaches with or following mucopurulent discharges from the nostrils, with symptoms pointing to meningeal involvement, are strongly suggestive of the probable or possible avenue of infection, and the accessory sinuses require careful investigation. Out of ten cases of cerebrospinal meningitis, in which Weichselbaum made sections, he found the cavities diseased in five, and cultures of pus from the nasal cavities and meninges have revealed the presence of the diplococcus pneumoniæ and other pus-producing bacilli as well as the diplococcus intracellularis.

As predisposing factors may be regarded: (*a*) congenital defective formations in the long walls of the cavities; (*b*) partial or complete occlusion of normal apertures of cavities; and (*c*) especial virulence of infectious material.

Operation for Epileptic Seizure; Recovery.

With a much happier result than has followed much of the haphazard and discreditable brain surgery for the relief of epilepsy and all sorts of intracranial conditions, Dr. H. Reinehing (*Journal of the American Medical Association*, Feb. 24, 1900) operated in a case of injury received eight weeks earlier, and in which the condition was becoming intolerable through the daily recurrence of attacks of muscular twitching, rigidity, etc., some of the attacks being of great violence. A small scar, but no apparent diffusion, was evident, but the hand and arm center for the right side seemed to be the site of great irritation. A large bone-flap was raised, the dura being wounded only at one point and appearing healthy. There was no evidence of bulging, fractures, or depression, and the flap was carefully replaced. An entire cessation of the troublesome attacks followed. Recovery was uneventful. It is difficult to clearly understand just what the irritative condition was here which the operation relieved. The history of trauma, the scar, and the grave condition of the patient justified the operation, and the happy recovery has still further justified the step.

THE MEDICAL AGE

VOL. XVIII. DETROIT, MAY 25, 1900. No. 10.

ORIGINAL CONTRIBUTIONS.

POSTHOM SHADOWS IN MEDICAL SCIENCE.*

BY W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor Clinical Gynecology, Detroit College of Medicine.

Standing at the open portal of an unknown future it is natural that you should look forward with eagerness and anticipation along the path which leads to the distant horizon of your lives, and which the light of present hope and expectation illumines with brilliant shafts of roseate hue. In the unexplored beyond lies an undiscovered country whose fertile fields await your cultivation and whose majestic mountains invite the adventurous and hardy to deeds of courage and of strength. There reputations are to be won, golden success achieved, and there perhaps, for some of you, imperishable fame holds out alluring hands. But as you stand in the freshness of your new-won honors facing the rising sun, the pencils of light which seem to brighten your future pathway cast a shadow behind—a shadow which traces backwards until lost in the dim and hazy outline of the past—a shadow whose reflection will ever somewhat lie along the vista of the future.

Just as chemistry teaches that matter is indestructible, so life and experience show that whatever makes for the good of humanity outlives its momentary purpose, and, accumulating power with the growth of time, projects its beneficent influence through all the ages to countless generations.

Three thousand years ago a great king who had sapped the sweets of life until excess had cloyed his palate wrote these words: "The thing that hath been, it is that which shall be; and that which is done

*An address delivered before the graduating class, Detroit College of Medicine, May 10, 1900.

is that which shall be done; and there is no new thing under the sun." This broad truth is blazoned on every page of medical history from remotest periods to the present day, and the careful student may see in each unfolding bud of new discovery the shadow germ of ancient wisdom. Like the flora of the coral islands, all modern achievement grows and flourishes upon the basal substance of the past; for knowledge, however long obscured or hidden, is never lost, but sooner or later finds its Renaissance, though under varied and new surroundings.

The tendency of this practical and utilitarian age is to ignore those things which have gone before, and, by modern and improved methods, to attempt the hatching of the golden egg without the trouble and delays of incubation. But however much we may evade the question, the fact remains that the wonderful achievements of the century just closed were made possible only through the wonderful achievements of the centuries which preceded it, and what we look upon to-day with awe and admiration is but the foreshadowing of what is yet to come.

Hark back to the beginning of time, and you will still hear the words of the Preacher ringing clear and true, and you will find that modern progress has its birthplace in the past just as future advancement takes its initiative in the present.

The Mosaic laws, promulgated centuries before the Christian era, are possibly more pertinent to-day than when first imposed upon the wandering and rebellious Israelitish hosts; and the infection-carrying fly is as great a problem to the twentieth century scientific world as it was to the plague-ridden, irascible, and hard-hearted Rameses.

The discovery of the circulation of the blood, which has made the name of Harvey familiar to three centuries of men, was plainly foreshadowed in the works of Shakespeare many years before the discovery was made; while the germ theory was, according to the works of Cotton Mather, "a medical working hypothesis two centuries ago" (Kiernan).

Henri de Mondeville, a pupil of Theodoric of Bologne, and who lectured in Paris from 1306 to 1312, held that the "formation of pus was not necessary for the cicatrization of wounds," and employed surgical dressings of wine, the active principle of which is alcohol; thus anticipating the efforts of Lister and the antiseptic system by several hundred years. In a portrait of Dr. John Clarke, the first educated physician who lived in New England, a Hey's saw is depicted, an instrument still employed in the operation of trephining for depressed cranial bones. Clarke died in 1661, more than a hundred years before Hey was born. But the shadow of this instrument reaches backward into still greater antiquity, for it was probably known in the days of

Hippocrates, and is figured in the Armamentarium Chirurgicum of Scultetas. De Mondeville also used the ligature in checking arterial hemorrhage. This method was lost sight of, the actual cautery being employed for the purpose, until the ligature was reintroduced, under great opposition, by Ambrose Paré in the early part of the sixteenth century. But long before De Mondeville's day, Celsus had written of the ligature, and Archigenes of Apamea tied the vessels after amputation, as well as made use of a ligature (Esmarch's bandage) at the root of the member before operation.

The recent discussion on the infectiousness of tuberculosis which has stirred our medical societies and engaged the attention of the courts of law, is but the reflection of what took place early in the nineteenth century in Italy, when the house in which the poet Keats had died was disinfected and quarantined by the city officials against the supposed contagium.

Anesthetics in surgery were well known to the ancients. Boccaccio, who flourished between 1313 and 1375, mentions their use in the Decameron; and later the dramatist Thomas Middleton, in a play printed in 1657, says:

> I'll imitate the pities of old surgeons
> To this lost limb; who, ere they show their art,
> Cast one asleep, then cut the diseaséd part.

As early as 1800 Sir Humphry Davy declared that nitrous oxide could be used in surgical operations; and in 1818, twenty-eight years before Morton anesthetized his first patient, Faraday mentions that the vapor of ether mixed with air has an effect similar to that of nitrous oxide. Even those pestiferous fellows, the advertising doctor and the testimonial fiend, are old-time products, having flourished long before the days of that prince of charlatans, Paracelsus. That they then as now found their ready dupes is indicated in Goldsmith's lines:

> As puffing quacks some caitiff wretch procure,
> To swear the drops or pills had wrought a cure.

These few illustrations will serve to show that the hall-mark of the past is plainly visible in the present, and that while evolution may modify and change in form and uses, the archetype of existing things is always to be found.

As beginning practitioners of medicine I would have you study the history of your craft in order that you may compare and weigh the present with the past, and from the results deduced lay your future course in life. By so doing, you will learn that much of the vaunted progress of the day is but the rehabilitation of old ideas, and will be in position to sift the dross of pretension from the gold of fact.

At the same time, while studying the past and taking advantage of all her store of accumulated wisdom, I would not have you neglect the present, but remember the words of Lord Bacon, that "they that reverence too much old times are but a scorn to the new," and that "he that will not apply new remedies must expect new evils." The past should be but the stepping-stone to the present and the future; let nothing be taken for granted. "Prove all things; hold fast that which is good!"

Much, if not all, of our present advancement in the knowledge of disease emanates from the laboratory, where the patient and painstaking investigator has solved problems which hitherto held the world in a grasp of terror, and thus made possible the saving of hundreds and thousands of human lives. The development of the simple "flea-glass" of the ancients into the magnificent compound microscope with achromatic lenses of the present day, has made it possible to study disease in its initial stages, to determine its cause, and in the majority of instances to apply the successful remedy. While at one time largely empirical, medicine has cast aside the swaddling clothes of uncertainty and must now be regarded as an exact science; the theory of the past, which was largely a confession of ignorance, having given place to practice along well established and scientific lines.

"Don't think, try; be patient, be accurate," was a favorite expression of the great John Hunter; to which Oliver Wendell Holmes might reply, "Wherever rigid experiment carries us we are safe in following this lead; but the moment we begin to theorize beyond our strictest observation, we are in danger of falling into those mechanical follies which true science has long outgrown."

As for you yourselves, your walk will be along the somber side of life, for men in the vigor of health have no need of a physician. Sickness and sorrow, and misery and despair will call upon you to minister to their necessity; and the dying will look to you to guide their footsteps along the way that has no turn. The badness and the goodness of men's lives will be laid bare before you as before no earthly priest, and the meanness and the generosity of the human heart will be exhibited in marked contrast. You will be present when the first breath of life warms and thrills the body into new existence, and you will draw the curtain over all when the day's work is done.

Gratitude will not be your most frequent recompense, but you will take comfort in the thought and have the satisfaction of knowing that you have done your duty and your best.

Shadows of the present will lie thick about you, therefore the greater need that you yourselves should maintain a happy and

cheerful attitude toward all the world, for "a merry heart doeth good like a medicine," and a kindly spirit is better than many drugs.

In order that you may carry on your professional work to the greatest advantage it is of the utmost importance that you should take care of your own bodies and not neglect your own health. Above all things let me warn you against acquiring the habit of depending upon alcoholic stimulants and narcotic drugs to assist you in keeping up under the strain of an arduous and exacting practice. I well remember the sad and deplorable picture which my friend the late Dr. William Goodell drew, for a small party assembled at dinner, from his memory of bright lives that had been tempted along this slippery path to utter annihilation. A recent writer has claimed that twenty-one per cent of those who practice medicine become addicted to habits of this kind, than which there is no quicker or surer road to self-destruction and blasted hopes. In your daily life you will run against the shadows of all sorts and conditions of men, some of which will be baneful; some cheap substitutes, shams, and imitations; some cheerful. There will be a little tragedy, some comedy, and much that is commonplace in your daily round. Mr. Barrie's inimitable Tommy, late of Thrums, tells us that once while running he turned the corner so suddenly that he "dislocated his shadow." The same young man, years later, "ricked" his foot in the door to appease this Nemesis of his own conceit. In the course of your existence you will meet with many such instances.

But after all there will be much of pleasure and satisfaction in your lives, and encouragement will follow your efforts to relieve pain and suffering and combat disease. Outside of your professional work every form of legitimate enjoyment will be enhanced many fold, and in order that you may have something for digression, for the relief of mind and weariness of spirit, I strongly advise you to take up some hobby that proves congenial. Art, literature, music, and mechanics offer a variety from which to choose, and you will be not only better men but more successful physicians for having some such relaxation to which to turn. It has been said that "no profession more strongly marks men than that of medicine." Character, education, and perseverance will surely bring success, however long the preliminary wait may be; and whether you shall reap great pecuniary profit or not, you will always feel that your avocation is the highest, noblest, and most honorable of the great professions; for while others may give of their substance you will give of yourselves, and the best that is in you will be for the benefit of the community in which you reside.

"To be the welcome visitor," says Da Costa, "the one to whom all turn in trouble, and to whom family secrets are confided with the

freest faith that they will be sacredly guarded; to be eagerly sought for in hours of danger and anguish and feel that you have the power of relieving; to be the hope of many and the friend of all—this, surely, makes a splendid calling."

Into such a calling you now enter, and in behalf of the members of this Faculty I bid you welcome, and as you go out to bear your share in the heat and labor of the day your alma mater wishes you one and all a hearty "Godspeed."

32 Adams Ave. W., Detroit.

THE APPLICANT FOR LIFE INSURANCE SHOULD RECEIVE MORE PROTECTION IN HIS MEDICAL EXAMINATION.

BY J. HOWE ADAMS, M.D., PHILADELPHIA, PA.

It has become the custom of business men to employ special help for special work, and generally with excellent results. When a man sells a piece of property he calls in his own lawyer or his real estate agent to protect his interests; when he undertakes any other work of which he feels he is not himself a competent judge, he gets some skilled assistance upon the subject from experts. But when a man applies for life insurance, he is examined solely by what might be termed his business opponents, for the object of the investigation is really, as far as he is concerned, unfriendly. The examination is intended to deprive him of the benefits of life insurance for the advantage of the company without possibility of appeal if the medical examiner or director regards him as unsuited.

The reason for this is that this question has been unanimously decided in the present way because the medical examiner has uniformly been an honest man, and he has used his best efforts both for the benefit of his company and for the benefit of the insured. At the same time, he is the watch-dog for the insurance company, and he realizes that on his judgment and the carefulness of his investigation much of the ultimate financial success of the company depends. Again, the local agent looks after the interest of the insured as actively as he can, for he naturally is anxious to have the insurance placed; but as a rule he possesses no medical knowledge, and he is unable to be a guide in cases of doubt or dispute.

The medical director, who also examines the data which he obtains from the local medical examiner, is often placed in matters of doubt in great embarrassment. He has had no opportunity for seeing the candidate for admission, and he is deprived in this way of an important element in making up his diagnosis of the case. Of course in a

large proportion of cases the report sent in by the medical examiner is so clear-cut that the director has no difficulty in making up a decision; for example, when the report is so good that there is not a cloud in the sky, or where the report contains evidence of definite disease, there is naturally no time lost by the medical director. But when he comes to the doubtful cases which stand partly in one class and partly in another, he is put in an embarrassing position. If he allows good risks to escape, he is doing an injury to his company; if, on the other hand, he saddles the books of the company with poor risks, he does it a greater harm. In consequence there is no doubt that in many cases of uncertainty the medical director turns down the applicant not because he knows he is a "bad risk," but because he fears he may develop into one. By the arrangement which companies have with each other, of reporting mutually the rejected risks, still further doubt and embarrassment comes into the mind of the medical director. If, for any cause, a man is rejected by one company, the fact assumes the utmost importance to another company. It is a "black eye" of the deepest hue for the applicant. The reason for this is self-evident; if a medical director accepts what looks to him to be a good risk, but one which has been rejected by another company, and that risk should die not long after admission, the question which would at once come to the minds of the managers of the company would be, "Why was this man accepted, when he was rejected by such and such a company, and he proves that he was a bad risk by dying almost at once?" It is much safer and much easier, therefore, for the medical director to turn down such risks at once. Under these circumstances he is likely to hear no protests except possibly a feeble "kick" from the agent or the applicant.

For this reason, therefore, it is my belief, after ten years of work as a medical examiner, that every applicant for life insurance should have some protection or some scientific knowledge of his own condition other than that supplied by the medical examiner. I know that this is true among medical men themselves; in the few examinations which I have undergone for life insurance myself, I have always, within a day or two previously, either made, or had made, a careful examination of my condition before presenting myself to the accredited medical examiner of the company to whose ranks I wished to be admitted.

I will endeavor to present a few reasons, outside of those which I have already stated, why and how the applicant should protect himself. In the first place I do not believe that it lies within the province of the company to suggest to the applicant that he fortify himself with a previous examination; on the contrary I think that such advice coming

from such a source would be very ill-advised. It should either come from the agent of the company, from the family physician of the applicant, or from the general knowledge which the applicant himself has picked up.

I. *The presence of albumin in the urine is a common cause for rejection in all companies.* The significance which is attached by the medical director and the medical examiner to the presence of this symptom, it is scarcely possible to overstate. It is generally regarded as the conclusive evidence of the existence of Bright's disease. A man who has once been rejected for this reason has his chance for future acceptance lessened very materially. And yet undoubtedly it requires much more than the mere chemical examination of the urine to determine the presence or absence of albumin, tube casts, and the other symptoms of Bright's disease. It would be well if every company would require that a careful microscopic examination be made of the urine of every applicant.

Undoubtedly more importance is attached to the presence of albumin in the urine than it actually deserves. A number of years ago Professor Tyson, the well known expert on urinary analysis, published a paper on "Intermittent Albuminuria in its Relation to Life Insurance," in which he drew these valuable conclusions:

"(1) The applicant must in all other respects present the signs of good health. (2) The albuminuria should be unaccompanied by tube casts. (3) If the quantity of albumin is large, the applicant should be rejected irrespective of the presence of casts. The term 'large albuminuria' admits, of course, of considerable latitude in its application; an albuminuria is large in which the albumin habitually equals one fifth the bulk of the specimen examined. (4) A consideration which goes far toward establishing the functional character of an albuminuria, although not essential to this end, is the absence of albumin on rising in the morning. Nor dare it of course be said that such an albuminuria precludes the existence of organic disease; it must be taken in connection with the other considerations named. (5) A point of importance is the specific gravity, meaning thereby the specific gravity of the 'twenty-four hours' urine. Whenever in addition to the absence of other symptoms this specific gravity is above 1020, another important fact is in evidence against the presence of organic disease, and in favor of the view that the albuminuria is functional. On the other hand, if the real specific gravity of the urine be 1012, 1010, or 1008, or even less, as it sometimes is, it would be hazardous to accept such a case of albuminuria, however good may be the apparent health of the applicant, and even in the absence of casts. To judge unfavorably from the specific gravity of any portion of the twenty four

hours' urine would be exceedingly unfair to the candidate. (6) The signs of hypertrophy of the left ventricle of the heart and of high vascular tension associated with albuminuria are conclusive symptoms of renal disease and should exclude the candidate. (7) A highly important consideration is the age of the candidate. Albuminuria is much less apt to be of a functional kind in persons over forty years of age than in those who are younger, especially between the ages of twenty-one and twenty-five. It is doubtful whether any person with seemingly functional albuminuria who has reached the age of forty should be accepted unless he has long been under the observation of a competent and conscientious observer. (8) The presence of true gout in any shape precludes admission to life insurance, because gout is always sooner or later followed by interstitial nephritis. Finally, the retinal symptoms so commonly associated with chronic Bright's disease, although usually late in their appearance, do sometimes form the earliest noted sign of this affection, and whether or not conjoined with albuminuria must effectually exclude the candidate from the advantages of life insurance."

Of course this matter is not left undisputed. Dr. Geo. Johnson, an Englishman, published some observations on the same subject in which he came to the following opposite conclusions:

"(1) The presence of albumin in the urine, even though small and intermittent in amount, is always pathological. (2) The examination of urine in all ailments, even though slight, has led to the detection of albuminuria in many youths and adolescents who are especially liable to be predisposed to the commonest of its existing causes, as cold, moisture, or overfatigue, and who have not lived long enough for the ultimate evil results of a neglected albuminuria. (3) Albuminuria, whether intermittent or persistent, in persons of apparent good health has not such special features as to justify the term 'physiological,' 'functional,' or 'cyclical,' or 'the albuminuria of adolescence.' The term albuminuria of adolescence is especially an improper one, because such albuminuria is observed at all ages in both sexes. (4) In almost all cases of albuminuria it is possible by careful examination to discover the cause. (5) Almost every case of acute nephritis passes through a stage of intermittent albuminuria in its progress to convalescence, and on the other hand one is almost always able to trace intermittent albuminuria back to a more or less remote attack of acute nephritis. (6) Intermittent albuminuria is curable if all its causes are understood; these are combated by appropriate means, while neglect of this may lead to a persistent form which, although it may be unattended for many years by symptoms of deranged health, ultimately results in a fatal degeneration of the kidneys. (7) It results

from these facts that one ought to examine the urine in every disease and in every candidate for life insurance, however robust he may seem to be. (8) Finally, it is necessary to examine the urine not only after rest in bed, but before and after food and exercise."

Dr. Johnson does not think that any prudent medical officer should advise that a proposed assurer with a trace of albumin should be accepted at the ordinary rate of premium, for it must involve some extra risk.

There is no doubt that there is a form of albuminuria in which the albumin appears in the urine after eating of certain kinds of food, possibly in rather immoderate amounts, such as eggs, cheese, or pastry. Consequently this condition is not constantly present, but occurs at special periods, such as after breakfast or a noonday meal. It can only follow the taking of food, and as a rule it follows this action very promptly; it is not attended by any other sign of disease, tube casts being totally absent.

It is a very important factor in the diagnosis of dietetic albuminuria to remember that albumin is never found in the urine before breakfast, and there is lacking all the signs of disorder of the nervous system found commonly in other forms of kidney trouble. The urine shows a high specific gravity; in fact, many observers lay great stress on this point, claiming that this condition is invariably present in these cases. This point of high specific gravity is one of great importance in kidney trouble; except in very acute cases of Bright's disease, or in those advanced cases where there is a diminution of the solid matter in the urine which is counterbalanced by the decrease in the water excreted, thus raising the specific gravity, the presence of high specific gravity in any urine is fair presumptive evidence that the urine is not from a case of Bright's disease.

The absence of albumin in the early morning urine in dietetic albuminuria becomes a matter of great importance in many instances, even outside strictly medical matters; for example, Dr. Pavy, of London, relates a case occurring in his practice in which a young lad seeking a position in the English civil service was rejected on the ground of the presence of albumin in his urine. His medical adviser thought of the possibility of its being this form of albuminuria, and found that his urine passed on rising was perfectly normal in its constituents.

There is another form of albuminuria, following severe exercise. Its diagnostic point is the fact that it occurs only after strenuous efforts or exertion, while there is an absence of all other symptoms, both as regards the nervous system and the digestive state. The severe exertion does not produce albuminuria in a distinctive or striking manner, and as soon as the strain is over, the abnormal

ingredient at once disappears. It is much more difficult to distinguish between true dietetic albuminuria and that due to malassimilation; in fact, these forms are generally confused. Possibly the difference is only one of degree, but in that form due to excessive uric acid formation the symptoms are much more marked than in the pure dietetic form.

In the uric acid variety of albuminuria the patient suffers from indigestion, flatulence, and constipation; he is very nervous; mentally he is greatly depressed about himself; and he is frequently annoyed by an irritable bladder. Albumin is found in the urine frequently, being most marked in the afternoon evacuations. Occasionally a few epithelial casts may be found; the urine is strongly acid, with a specific gravity rarely below 1022, and with deposits of quantities of "brick-dust." This uric acid malassimilation may become so marked that it will be confused with the ordinary form of Bright's disease, especially when the patient exhibits some body waste, indisposition to either mental or physical exertion, and is easily fatigued, with the production of frequent headaches and vertigo.

But to distinguish this malassimilation condition from true Bright's disease we soon see that the hypertrophies and other cardiac lesions of Bright's disease are wanting; there is no dropsy or eye lesions, and the actual character of the urine is most significant. It is in the urine that the diagnosis must be made, after all; first of all there is the high specific gravity in uric acid conditions in a urine that is about normal in amount or a little scantier than normal. The specific gravity generally ranges high, from 1022 to even as high as 1036. The urine on standing deposits urates, even uric acid, and frequently mucus; or in the deposits, in the place of urates, are often found crystals of the oxalate of calcium, for the uric acid condition does not necessarily show itself in the presence of urates in the urine.

Thus we have several forms of albuminuria which have been rescued from the list of Bright's disease; the clinical history impresses on us that in the examination of the urine it is not sufficient to make the ordinary tests for albumin, but the investigation must be pushed further. If the urine is examined in a routine way without regard to these points, the candidate will often be condemned when his condition does not justify it at all.

There are other sources of error, however, in the examination of urine. For example, some years ago I examined an applicant for insurance on a very cold day in summer-time. The weather up to this time had been very warm and oppressive, and the change had come during the night. The applicant during the evening before had been drinking beer with some friends, and I examined him about nine

o'clock in the morning. I found on examination that the specific gravity of his urine was very low; I do not remember nor can I find a record of what it was exactly, but it was not more than 1004 or 1005. It was necessary to get the examination in at once, as the young man was going away on his vacation that day, to be gone for several weeks; in fact, it was his going away that led him to apply for the insurance. I stated the circumstances under which I obtained the specimen of urine examined to the medical director, but in a few days the report came back that the young man was rejected on account of the "unsatisfactory report of the examination of his urine." I explained the circumstances to the agent, and personally looked up the young man, made another examination, and eventually succeeded in getting his application accepted. But if I had taken no further interest in the case after making the examination the young man would have received a "black eye" which would have followed him through life, and all for no reason whatsoever.

II. A further reason why the applicant should receive careful attention from his own physician is the custom of many companies of obtaining information in regard to the habits and life of the applicant unknown to the local agent or examiner. For instance, in one examination an applicant, after much apparent hesitation for several weeks on the part of the officers of the company, was turned down because, as they stated, they learned "that the applicant was practically a habitual drunkard." It so happened that the man was a superintendent of a large iron works in Pennsylvania, and I knew him to be a man of most exemplary habits. The agent, to whom the applicant's habits were also known, was nonplused as to the way in which the report could have been obtained. It upset and provoked the applicant and the agent far more than either dared to state. Subsequent investigation proved that the company had made arrangements with a local detective agency to determine for them the habits of certain applicants. With the astuteness which marks the average detective, this "Hawkshaw" simply called upon the applicant, and without stating his business or even his name, began to ask a number of personal and, to the applicant, impertinent questions. The applicant did not associate this visit with his application for life insurance, but grasped the idea that his visitor was from some financial agency. As his rating was good and he did not care to have it improved, he grew tired of the inquisitor, and as the latter became rather impudent the matter finally ended by the superintendent of the company ordering his visitor out of his office. In revenge for his treatment the detective, without the slightest evidence to prove his assertion, simply turned in the report to the insurance company that the applicant was

a habitual drunkard. The upshot of the whole matter was that the company lost a first-class risk and subjected themselves to considerable criticism and annoyance. This is a point which the agent of the company would do well to speak of to the applicant—that is, the possibility of the investigation of his manner of life.

Personally I do not believe that a risk showing albumin in the urine should be accepted by an ordinary company, but being examined beforehand, his condition might be detected and corrected. No applicant should be in reality ever rejected, because he should know his condition in advance, and if hopeless as a risk he need not apply. There are other questions besides these which it would be well for an applicant to be advised upon, such as over- or under-weight, family history, etc.; but certainly the idea is of practical moment and worthy of consideration.

MALIGNANT DISEASE OF THE UTERUS; MALARIA.*

BY WILLIAM H. WATHEN, M.D., LL.D.,

Professor of Obstetrics, Abdominal Surgery, and Gynecology in the Kentucky School of Medicine; Gynecologist to the Kentucky School of Medicine Hospital, etc., Louisville, Kentucky.

I will report a case of malignant disease that will indicate to us that we are not always able to give a correct prognosis of the final results of malignant processes beginning in the uterus, as to its progress or the length of time when death will occur if the disease is not removed. Nearly all cases of malignant disease of the uterus that I have treated or observed, unless the disease was entirely removed, have resulted in death within, I think, one year.

The case was first seen by me a little over four years ago, and is now in the city under my treatment, beyond, however, that stage of the disease that will admit of total extirpation by hysterectomy.

In November, four years ago, a maiden lady aged fifty two years, from near Carlisle, Ky., consulted me, and the symptoms from which she suffered indicated malignant disease, though I could find no positive physical sign of disease in the vagina or neck of the uterus, nor in the general appearance of the uterus as to size and position. In curetting I removed one or two tablespoonfuls of tissue that had the appearance of being malignant. I have never observed such tissue from any case that was not malignant. Dr. William Vissman made a thorough examination of the scrapings and expressed the opinion that the disease was malignant. The woman returned home in about two weeks with instructions if there was a recurrence of the symptoms to return

* Reported to the Louisville Clinical Society.

to me at once. She apparently got well; she had no hemorrhage, and no evidence of malignancy followed the operation; she gained in flesh, and looked perfectly well.

In six months she married a wealthy widower. I of course supposed then she would come back very soon, because I thought the conditions incident to married life would be such as would probably cause the disease to progress more rapidly. She did well for a year after she was married, and then began bleeding slightly, and passed from the uterus a soft mass probably three or four cubic inches in size. It was sent to me, and under microscopical observation gave no evidence of any well organized structure. The opinion given by the pathologist was that he "could not tell what the tissue was." Possibly it had been kept too long before being examined, and had begun to decompose. Several months later another similar mass was expelled from the uterus, except that it was not so large as the first.

She could not be induced to return to see me until a week ago, when she reached the city and went to the Infirmary. She now has some cachexia, but not a great deal; she has lost probably fifteen pounds in weight, and has a constant discharge from the vagina, not very offensive, and containing very little blood, but she gives the history of having had several rather profuse hemorrhages.

In an examination *per vaginam* it was discovered that the malignant disease had extended down into the vagina on the left side within one inch of the vulva; upon the right side anteriorly it had also extended down nearly to the vulva, and had invaded the structures around the uterus so extensively that the uterus was immovable. From the neck of the uterus there was protruding into the vagina a mass about one inch in diameter and two inches in length. This was removed, and it was found that the tissues in the vaginal wall could not be curetted as there was no ulceration, simply a hardening or thickening of the tissues deep seated. I had read the day before a translation, I think, from some German paper of the good results derived from injections of alcohol diluted with equal parts of water to the base of malignant tissue, particularly the favorable results in cancer of the breast; so after I removed this growth from the uterus and curetted from the uterus any loose tissue, I tamponed the uterus and upper part of the vagina, and injected under the vaginal infiltration about ten cubic centimeters of alcohol diluted with equal parts of water, on each side. The woman had no shock from the operation, and she was put to bed about nine o'clock. At four o'clock I was telephoned for; her pulse was 140 to 150 per minute, temperature 104° to 105° F. I hurried to the Infirmary and found that she had lost no blood, but was slightly delirious. Having had cases of iodoform poisoning recently, I sus-

pected the same condition in this case. I removed the two pieces of iodoform gauze and washed out the vagina with sterilized water. Next morning her temperature showed only one degree above normal, pulse 100. No more gauze was introduced. About one o'clock she began having fever with acceleration of pulse, temperature finally going to 103° F., pulse to 120. Then I changed my diagnosis to malaria, and gave her, in five-grain doses, twenty grains of the bisulphate of quinine at regular intervals. The following day at about the same time her pulse became accelerated, and she again had fever, pulse going up to 110, temperature to 103° F. Each day during this fever she had some delirium; tongue on the first day was very dry, but on the second and third days it was rather moist, as much so as we usually see in a patient with a temperature of 103° F. The woman is cheerful, her bowels have moved, her kidneys are acting well, and she has no trouble in voiding her urine. To-night I have again confirmed my diagnosis of yesterday, that it is a case of malaria, and have prescribed the sulphate of quinine five grains every three hours.

The case will go on to a fatal termination, but I will probably have an opportunity of learning the result of the injections of alcohol. I am not able to say whether she had fever each day before she came here; she gives no such history; neither do I know what her temperature was before the operation, because I do not believe the nurse took the temperature. I am positive that the fever is not from the iodoform gauze, as it could not have occurred without the introduction of iodoform at the same hour for three consecutive days.

THE *British Medical Journal*, quoting the *Moniteur Oriental*, says the Turkish government has hit upon an ingenious device for checking unqualified practice and at the same time levying a tax on the legitimate practitioner. It is proposed to make the use of prescription books bearing a government stamp compulsory on all medical practitioners. It is estimated that this would yield to the treasury a revenue of 300,000 or 400,000 piastres a year, while quacks would be hindered in their depredations by the fact that in each prescription book the name of the doctor using it and the number of his diploma must be inscribed. The proposal has been referred to the directing committee of military schools. Similar plans have been suggested more than once before, and have been rejected, and it is thought unlikely that the present proposal will be more successful.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE RICH SPECIALIST.

The fees received by the medical or surgical specialist seldom exceed the bounds of moderation, and as compared with the rewards bestowed on special knowledge in other departments, they may be said seldom to exceed the limits of parsimony. Nevertheless the mind of the dear public is perpetually agitated by lurid conceptions of the cupidity of the medical profession, and to offset this here in Michigan it has recently been proposed to regulate the fees of physicians by law.

In a recent number of the *Journal of the American Medical Association*, our fellow townsman, Dr. J. H. Carstens, gives, in reply to the request of a brother physician, some very practical information serving to show that the specialist is in no sense overpaid. The writer, as a gynecologist, represents a specialty whose vital activity should cause it to command as high remuneration as other specialties. His presentation of the matter, therefore, may be said to indicate clearly the position of the specialist in general.

Dr. Carstens quotes figures from his own ledger to show that he has not been remunerated excessively. He takes the year 1899, and finds that in that year he did about two-thirds of his usual work, being absent in Europe for a considerable length of time. During the year he operated on 172 cases of abdominal sections of various kinds. Of these, fifty-two paid as follows: One, $600; two, $300; two, $250; five, $200; six, $150; and thirty-six paid $100. Sixteen patients agreed to pay, but did not, and the bills were given to a collector to do the best he could and compromise, taking from $10 to $50 in each case. Seventeen of the non-paying patients paid a consultation fee of $5, $10, or $25 when they first came, but when it came to the operation they were unable to pay.

An operation was never done for less than $100. The writer will do the operation for nothing, for glory or love of the race, but will not belittle the operation by accepting $20 or $50 as some are glad to do.

Thus it will be seen that the doctor on an average received less than $50 apiece for each abdominal section. Those who paid the higher fees enabled the poor "schoolmarm" from the country, who earns $15 a month, to be relieved of her fibroid tumor. The workman with a family, earning $1.25 a day, was operated on for his appendicitis. The poor widow with three children, ekeing out an existence as a cook, received surgical aid. It does not take a high degree of mathematical ingenuity to realize that all this work, in the purely financial sense, received naught but the most meager compensation.

The writer further ventures his opinion that, as compared with the general practitioner, the specialist does not achieve the highest financial rewards of the professional career. Most real specialists do little more than earn their living. The pseudo-specialist, he who poses as a specialist but with vulpine greed cannot resist taking anything that will pay him, is more likely to be a financial success than the real specialist, who restricts himself faithfully to his chosen work. It is the duty of the general practitioner to discriminate far more closely between the specialist and the pseudo-specialist. There may be, of course, a stage in the development of a specialist when he is not full-fledged. The truest evolution of a specialist is that which is based on the gradual selection of that which he is best fitted to perform. The profession, however, cannot recognize too keenly between the flutterer and the full-fledged.

The profession will appreciate the lofty sentiments with which Dr. Carstens closes his useful letter. The highest rewards of the profession of medicine have never been the financial ones. The highest fees paid are often the grateful tears of patients. That "the highest good of our patients shall be our constant endeavor" must be the vitalizing impulse of the professional career to-day as it was in the time of the father of medicine.

EDITORIAL NOTES.

The Human Fermentation.

A French author has written a book in which he gives expression to the singular comparison that the human organism is derived from a single cellule by a process of fermentation similar to the growth of the levulose cellule in beer. Normal fermentation is health; abnormal fermentation is disease; and so on. The paradox is one which is more glittering in appearance than reality.

ITEMS AND NOTES.

At present the death-rate in Philadelphia continues unusually high.

The April 28 number of *The Lancet* is the four thousandth number of that journal.

The New York legislature has at last passed the bill granting shorter hours to drug clerks.

The abuse of free clinics in New Orleans by those able to pay has grown to be a huge imposition.

A large number of cases of smallpox have recently developed in the upper section of New York City.

The famine in India is steadily increasing, and nearly six millions of people are now on the relief lists.

The Mount Sinai Hospital, New York, has just received a gift of $200,000 from M. Gugenheim and his sons.

It is reported that a large number of women in male attire have been discovered among the captured Boers.

Governor Roosevelt has signed the bill authorizing the city of Buffalo to spend $50,000 on a quarantine hospital.

A new medical society has been formed in New York City under the name of the New York Genito-Urinary Society.

In France the administration of solid food to infants under one year of age is forbidden by law, except upon the advice of a physician.

The Volbrecht prize of 12,000 marks for works on natural sciences has been awarded to Dr. Gegenbauer, professor of anatomy at Heidelberg.

The new Nurses' Home of the Episcopal Hospital, Philadelphia, has been recently completed. It is a three-story building, erected at a cost of $100,000.

On the seventieth birthday of Dr. Jacobi, of New York, he will be given a complimentary dinner by a number of his distinguished professional associates.

THE University of Pennsylvania has been presented with a bust of the late Dr. George B. Wood, formerly professor of the practice of medicine in that university.

COMPLAINTS have been lodged with the health department of Chicago against the sanitary conditions existing in a number of the cheaper theaters in that city.

ON May 4 a complimentary dinner was tendered to Prof. Wm. H. Welch, of Johns Hopkins school, by those who have carried on investigations in his laboratory in the past.

MANUEL GARCIA, the inventor of the laryngoscope, celebrated in London, on March 17, the ninety-fifth anniversary of his birth. He was born in Madrid, March 17, 1805.

BY a recent order of the French army medical service, medical officers are directed to use injections of antitetanic serum in large and repeated doses in all cases of pronounced tetanus.

THE New York State Pathological Institute has taken up the study of the question of the influence of certain musical tones and strains upon the nervous system, particularly in the case of the insane.

THE late Prof. Joseph Gruber, of European fame in oral surgery, was born in 1827, in Bohemia. He came to Vienna and graduated as doctor of medicine in 1855. He was the founder of the Austrian Otological Society.

IT has been decided by the authorities of the Johns Hopkins medical school to give special courses of instruction for graduates during May and June of each year. These courses will be of an entirely practical character.

THE Secretary of the Treasury has designated Dr. Victor E. Heiser as one of the United States delegates to the Congress for the Prevention of Tuberculosis, and the State Department has appointed Dr. Robert N. Wilson.

THE twenty-fifth annual meeting of the American Gynecological Society was held in the lecture hall of the Columbian University, Washington, May 1 to 3, under the presidency of Dr. George J. Engelmann, of Boston.

BELLEVUE HOSPITAL of New York has recently installed an apparatus for the hot-air treatment of rheumatism, gout, and kindred disorders. It can be applied to the whole body or to the limb alone, and is capable of giving a temperature of 400° F.

The twenty-sixth annual meeting of the American Neurological Association was held in Washington, in conjunction with the Congress of American Physicians and Surgeons, May 1 to 3, under the presidency of Dr. Edward D. Fisher, of New York.

Lieutenant-Colonel A. A. Woodhull, Captain William Stephenson, and Captain E. B. Frick, of the Medical Department, have been detailed to represent that department of the army at the meeting of the American Medical Association, to be held at Atlantic City, N. J., in June next.

At the annual meeting of the Medical Society of the State of New York in January, a resolution was adopted to the effect that the interests of medical science require the establishment of a bureau of materia medica in order to institute disinterested investigation into the character and value of new drugs.

On the initiative of Donna Teresa Duchess Ravaschieri and the Marchesa di Campolattio, a committee of ladies who are members of the League against Tuberculosis has been formed in Naples. The president of the committee is the Duchess Ravaschieri, to whom Professor Baccelli has addressed a letter of congratulation and encouragement.

The necessity for exercising great caution in the use of pork as food is again brought home very forcibly to us in the last report of the microscopist of the Department of Agriculture. In the microscopical inspection for trichinæ, 1,881,309 specimens were examined, and of these 13,325 were found to be infected. The expenses connected with this examination cost the government $11,669.

Dr. Evan Barker Jones, of Brooklyn, has been authorized by the courts to change his family name to Evan Barker. He takes the name because Dr. Jones's granduncle, Gilbert Barker, formerly a wealthy physician of Thorley, England, made a will, by the terms of which the nephew could not have an estate of $200,000 unless willing to assume the old doctor's surname and bear his coat of arms.

The *Venezuela Herald*, under the date of April 10, contains, according to the *Philadelphia Medical Journal*, the following announcement: "At the time of the taking of Puerto Cabello, in November, 1899, we pointed out to our readers the devoted conduct and disinterestedness which Dr. William C. Braisted, doctor of the *Detroit*, had displayed after the battle, when, during twelve consecutive hours, he operated on and cured numbers of wounded Venezuelans. This praiseworthy conduct has at last been rewarded by General Castro, who has just

advised our legation that Dr. Braisted has been decorated with the Order of Bolivar. It is to be wished that this decoration was always so justly merited."

A Paris omnibus, says an exchange, upset last May, and a medical student had his skull fractured. The driver and the company were held responsible, and Dr. Laugier testified that the injury to the skull had evidently caused a mental weakness, although there was no wound apparent at this date. The court awarded the student $5000, reserving the right to resume the case if his condition became aggravated.

According to the *Philadelphia Medical Journal*, the staff of the Long Island College Hospital are wondering over the case of Francisco Braschella, an Italian, who has lived in comparative comfort for forty-two years with a portion of his chest wall lacking. On the right side of the thorax is an area, four inches by three, where the bony wall is deficient. Examination with the *x* rays showed that three true ribs were only partially developed, and were, in consequence, very diminutive. In spite of this malformation the man insists that he has experienced very little difficulty in his work as a fruit dealer. The functions of the right arm were, however, somewhat impaired. There was nothing in the family or personal history to throw light on this anomaly.

Arbitration has never been applied to scientific questions, but three scientists at Buenos Ayres (*Journal of the American Medical Association*) have agreed to adopt it to decide to which belongs the credit of the discovery of the microbe causing the disease among sheep known as "lombriz," or worms. Dr. Lignieres first described it, and later Mercanti and Dessy described another, which Lignieres claims is identical with his. The director of the bacteriologic laboratory, Dr. Rivero, has accepted the task of deciding the question after thorough investigation. Dr. Lignieres is now experimenting on a large scale with his vaccine against Texas fever — which he calls "bovine malaria"—under the supervision of a committee appointed by the Department of Agriculture.

The late Professor Hofmokl was one of Vienna's greatest surgeons. Hofmokl was born in Brzezany, Galicia, where he received his early education, but graduated at the Vienna University. In 1868 he was appointed assistant surgeon to Dumreich's clinic, and in 1871 was appointed docent in surgery, in which capacity he wrote a good deal on operative surgery. In 1885 he was raised to the third chair of surgery of the Vienna University, which he held till December, 1898,

when he was suddenly seized with a paralytic stroke, from which he slightly recovered. He afterwards went to Abbazia to reside, where he had the title of Hofrath conferred on him. The change of residence, however, was without any beneficial effect on his health, and he died at a comparatively early age.

CHRISTIAN SCIENCE, according to Dr. John H. Huber (*Philadelphia Medical Journal*), is a cyclopathic epidemic. He stated in a recent lecture that the statements of Mrs. Eddy and her supporters attracted many persons of a temperament well understood by the student of mental pathology. He had noticed that most Christian scientists were persons in middle or advanced life, and this he attributed to the fact that youth is likely to be normal in its mentality. Christian science is akin to alchemy, mesmerism, hypnotism, and countless epidemics of abnormal mentality. They appeal to the emotional and hysterical, and readily seize upon whole communities. The four Christian science churches in Philadelphia are all in wealthy portions of the city, and there are no missions by which the blessings of their faith may be disseminated among the less fortunate. Dr. Huber said he had examined twenty cases of alleged cures by Christian science, and they had all been hysteria, neurasthenia, nervous dyspepsia, alcoholism, or similar examples of the sufferer's lack of self-control.

A PAPER by Dr. W. S. Colman, read before the Medical and Physical Society of St. Thomas's Hospital, and published in vol. xxvii of the *St. Thomas's Hospital Reports*, gives some interesting particulars relative to the great temple of Æsculapius at Epidaurus, and the strange combination of religious worship, medical treatment, and charlatanism which formed the occupation of the priests. The dormitory or abaton in which the cures took place was a great Ionic colonnade, 250 feet long and 32 feet wide, divided into an eastern and western section; in the western there were two stories. Benches of limestone extended along the side walls like a divan, and there were similar slabs to serve as couches placed transversely in the intervals between the pillars. In these wards and in the temple inscriptions were placed recording the ailments of some of the patients and the means by which they were relieved. Dr. Colman's map of the locality shows that the surroundings of the temple included baths, a gymnasium, a race-course, and a temple of Artemis; there was also in the immediate neighborhood a temple of Aphrodite, a divinity whose cult is not recognized in modern health resorts.

NEW PUBLICATIONS.

TWENTIETH CENTURY PRACTICE OF MEDICINE.

The new volume of the Twentieth Century Practice of Medicine is one that will prove itself exceptionally interesting to the general practitioner. It presents as unique and complete a contribution to the study of malaria as has ever been presented to the medical reader. The events which have been happening during the past two years having completely revolutionized current conception of the etiology of malarial disease, the issue of this volume was wisely delayed until these changes could be recorded. The first article is by Marchiafava and Bignami, and comprises more than one-half the volume. It is a classical review of the past history, etiology, hematology, and clinical history of malarial disease. Every page fairly bristles with learning. Simon Flexner contributes the article on microorganisms, detailing the bacteriological technique, and furnishing the materials for differential diagnosis. Opie, of Baltimore, describes the protozoa associated with malarial conditions. The book constitutes a most valuable addition to the literature of malaria and its associated problems. The opportunity for following the fascinating study of mosquitoes everywhere possible should make this volume acceptable to every physician in the country.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XIX: Malaria and Microorganisms. New York: William Wood & Co., 1900.

VENEREAL DISEASES.

Twenty years ago the senior author of this work put forth a volume on venereal disease which at this late date has scarcely ceased to be an authoritative work. The primary object of this book was to protest against the wide-spread use of anterior urethrotomy and to advocate the tonic treatment of syphilis by the prolonged use of mild doses of mercury. It must be a matter of great gratification to realize how extremely successful this mission has been. The junior author of the present work is well known for many original views and devices in the realm of genito-urinary surgery. Such a union of forces cannot fail to supply the profession with a text-book which shall contain the essence of truthful teaching in regard to venereal diseases.

The work is a text-book of great value. Clinical bacteriologic methods in demonstration of gonorrheal infection are admirably displayed, and a practical and clinical spirit pervades the work which will be an invaluable aid to the practitioner.

Venereal Diseases: Their Complications and Sequelæ. By Edward L. Keyes, A.M., M.D., and Charles H. Chetwood, M.D. Illustrated by Eight Full-page Plates in Black and Colors, and One Hundred and Seven Engravings. New York: William Wood & Company, 1900.

DISEASES OF THE NOSE AND THROAT.

A new manual upon the subject of Diseases of the Nose and Throat from the pen of Dr. J. Price-Brown has been published by the Davis press of Philadelphia. The author states that the work is intended as a handbook for the use of medical students and the general practitioner. It is profusely illustrated, and some of the original woodcuts and colored plates are very creditable; especially the numerous plates of frozen sections so colored as to give a very clear idea of the topographical relation of various parts.

In some places the text shows very careless construction, and at times the author, in endeavoring to make his remarks plain and easily understood, has sacrificed all pretense to a good English style. For the removal of adenoid vegetations the author highly commends the services of the digital finger-nail. It is quite possible to show that a finger-nail made approximately aseptic by scrubbing and soaking in antiseptics becomes altogether too soft for this purpose. To be useful in the removal of adenoids, the nail must be reasonably dry and hard, and under such circumstances it is necessarily unclean.

In the chapter devoted to the correction of deformities of the nasal septum, the author omits the mention of a number of important operations for the relief of this deformity which are generally considered quite as popular as those which he has mentioned, and which surely are much more successful in their results than the use of silver tubes, to which he pays detailed attention.

Aside from these superficial faults, the work is one of considerable value to the readers for whom it is primarily intended. A conservative but fairly complete line of therapeutics accompanies each pathological condition described, and there is nothing radical or unclassical in any position which the author takes. The book has been very honestly written, due credit being always given for paragraphs other than the author's own. As an introduction to the study of rhinology and laryngology, or as a reference handbook for the general practitioner, this new volume will be found very serviceable.

Diseases of the Nose and Throat. By J. Price-Brown, M.B., L.R.C.P.E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Western Hospital; Laryngologist to the Protestant Orphans' Home; Fellow of the American Laryngological, Rhinological, and Otological Society, etc., etc. Illustrated with 159 Engravings, Including Six Full-page Color-plates and Nine Color-cuts in the Text, Many of Them Original. Pages xvi–470. Extra Cloth, $3.50, net. Philadelphia: The F. A. Davis Co.

THE IRRIGATION TREATMENT OF GONORRHEA.

The author of this work has been for some years a prominent advocate of the irrigation method of treating gonorrhea. He has done more than revive the practice of irrigation, though he modestly says he "did nothing except devise a simpler apparatus, develop the technique, modify the medication, render the rules precise, and write many articles carefully weighing the advantages and unavoidable disadvantages of the irrigation treatment."

Dr. Valentine's book is an excellent account of all that may arise as complications and sequelæ of gonorrhea, and of the proper methods of treating these. The book is one which will be found useful in the highest degree, from the practical spirit in which it is conceived.

The Irrigation Treatment of Gonorrhea: Its Local Complications and Sequelæ. By Ferd C. Valentine, M.D. Illustrated by Fifty-seven Engravings. New York: William Wood & Company, 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Amputation and Longevity.

A prominent manufacturer of artificial limbs says (*Popular Science News*): "By looking over books which comprise the history of many thousand cripples, we arrive at the conclusion that dismembering plays no part whatever in shortening life. Our records date back to 1853, and it is an astonishing fact that, of the entire number of our patrons, less than twenty-five per cent have died, and most of those from old age or accident; and in no case can we learn of a death that can be directly ascribed to the loss of a limb. As we investigate this subject more thoroughly we are persuaded that amputations enhance vitality, render it not only probable, but positive, that on account of amputations the lives of the subjects will be prolonged and free from disease." No record can be found of a cripple becoming insane, and but very few cases where they have committed suicide. The mental as well as the vital forces appear to become strengthened by the dismemberment.

It is a noticeable fact that persons who lose their legs become very powerful in their arms, large in chest, and great in girth, and persons who lose their arms become powerful in their legs and large in girth. The loss of parts of the body conduces to health, life, and development. Dare, Melrose, Conway, Leland, and Fitzpatrick, one-legged acrobats whose muscular developments are the envy of the world, have never been surpassed by athletes with natural limbs.

A reasonable explanation may be found in the hypothesis that the removal of a part of the body lessens the demand on the vital forces, and permits the supplying reservoirs to contribute more abundantly to the remaining members. If it overtaxes the heart to force the blood through all the avenues of the body, will not its labors be lessened if a few of those avenues are forever removed? And will not the remaining avenues receive a larger proportion of the life-giving essences? If the nervous system is overburdened, will not the tax be lessened if a part of the nerve organization be removed? If a tree is permitted to grow, it will sap itself by the many choking branches that come from its trunk. The cutting off of these branches and the trimming up of the limbs always give new vigor to the tree. It will grow larger, stronger, and will live longer. A cripple is neither a cynic nor a pessimist. His misfortune has driven from him whatever

there may have been of the misanthropic. His health is always good, and he is therefore happier and more contented than the dyspeptic or rheumatic. Nature, with her usual generosity, compensates for every misfortune. Those who seem the most afflicted are often happiest; their minds have been prepared to endure misfortune.

THE TREATMENT OF CANCER BASED ON THE PARASITIC THEORY.

Dr. Inglis Parsons (*British Medical Journal*, April 28, 1900) in a paper on this subject says that the mortality of cancer in England and Wales is still over 20,000 annually. The present method of treatment cannot be considered satisfactory in the light of this fact. Sanfelice's discovery of a definite parasite opens up a possibility of treating the disease through the medium of the circulation, eradicating it entirely. The investigations of Pasteur, made more than twenty years ago, show that the saccharomycetes can obtain everything required for their nourishment in the human body, while Schutzenberger has demonstrated that they can extract oxygen from the red corpuscles through a thin membrane. The human body, therefore, is quite a suitable habitation for these fungi, except that their main food (sugar) can only be obtained in small quantities. This serves to explain the slow growth of the parasites as compared with their rapid growth in fermentation with abundance of sugar. The writer thinks that the two methods of propagation, by budding and sporing, would explain the great variations observed in the periods of recurrence, because when spores were formed they might remain quiescent for years before commencing active growth. The rapidity of growth in cancer of the liver and in stout persons could be explained because the liver is the storehouse for sugar, and in stout persons there is often an excess in the circulation which might even be found in the urine. We can now understand why the disease is more prevalent in the water-sheds and along the course of rivers, because the saccharomycetes flourish in moisture and damp atmosphere. Judging from Pasteur's work, there is no toxin formed by the yeasts. This would account for the clinical symptoms of cancer being different from the microbic group of diseases; in fact, he considers that Sanfelice's statement explains nearly everything in connection with the disease, and is probably correct.

The author then indicates the lines on which treatment might be successful. Various bacilli are hostile to these fungi, and some toxin might be found which would kill them without doing harm to the cells of the body. Various drugs and salts destroy these saccharomycetes; a selection of those that might be safely administered could be tried.

As phagocytosis does not take place, further knowledge might show how to induce it. An antidiabetic diet, so as to reduce the sugar as much as possible, is worth trying.

Rupture of Liver and Gall-bladder.

Injuries of the liver, according to C. V. Vischer (*International Journal of Surgery*, May, 1900), followed by a greater or less hemorrhage, are accompanied by shock, which is largely in proportion to the amount of the bleeding, and which has a tendency to grow progressively worse, terminating in collapse in a relatively short time.

Inasmuch as such injuries are usually fatal, operative interference, if at all undertaken, must be done at the earliest possible moment, for even after the hemorrhage ceases, peritonitis is most prone to develop in these cases.

In injuries to the gall-bladder, the shock is not so pronounced, and reaction usually sets in. The prognosis is, therefore, more favorable.

The escape of bile into the abdominal cavity, from a ruptured gall-bladder or ducts, is not necessarily fatal. Were it possible to recognize such an injury as a certainty, we would almost be justified in giving a favorable prognosis, and even in postponing operative interference until complete reaction from the shock has taken place.

The mere drainage of the abdominal cavity after rupture of the gall-bladder will often suffice as an operative procedure. In late interference we are apt to find adhesions of the viscera to such an extent as to make anatomical landmarks and visceral relationships unrecognizable, and inasmuch as they prevent the dissemination of any septic matter that may be present, it is advisable not to disturb them.

Treatment of Superficial Wounds Without Sutures.

In the treatment of superficial wounds without sutures, F. F. W. Whitbeck (*Medical Record*, April 14, 1900) says that the skin can be cleansed with soap and hot water, close shaving, and alcohol. Asepsis of wound and skin is then made sure by a careful wiping with dossils of absorbent cotton which have been soaked a few minutes in a 1:500 solution of bichloride of mercury. As soon as the parts are dry enough for the collodion to adhere, the edges of the wound are brought together and secured by cotton and collodion alone, or with the help of narrow strips of isinglass plaster moistened with the bichloride solution, or by similar strips of muslin or linen painted over with a thin coat of fresh flexible collodion. The thinnest possible layer (a mere layer of fibers) of dry, aseptic absorbent cotton is to be

applied, and it should overlap the angles and edges of the wound far enough to have a firm hold on the skin. It will do no harm, and it will not prevent but will rather help the union, if a little blood oozes under the dressing. The discoloration is objectionable in appearance only. The following day a fresh coating of cotton and collodion will whiten the dressing so that it will be less noticeable.

After four or five days the entire covering may be removed; better still after eight days. Or the dressing may be left on from ten to fourteen days, when it may be easily removed by peeling it off dry or by moistening it with a little ether.

Operative Measures in Tic-douloureux.

Lewellys F. Barker (*Journal of the American Medical Association*, May 5, 1900), in writing about operative measures in tic-douloureux, says that if a ganglion be entirely removed there need be no fear of a return of pain from irritation of the stump of the N. trigeminus left behind, for all of the axons of this stump will degenerate to their terminations in the pons and medulla, down as far as the cervical cord. The end of a nerve in an amputation stump is not analogous.

Complete removal of a Gasserian ganglion utterly abolishes the possibility of calling forth sensations in consciousness by applying stimuli to the domain of peripheral distribution of the nerves connected with the ganglion of the corresponding side; retention of sensation or peripheral stimulation after operation indicates incomplete removal.

If pain persists, paroxysmally or continuously, after complete removal of the ganglion, or after evulsion of the N. trigeminus from the pons, the ganglion being left *in situ*, a lesion of the central neurons—of the second or of higher orders—of the trigeminal afferent conduction path is indicated.

In tic-douloureux due to disease of the peripheral set of trigeminal sensory neurons, relief should be as complete and permanent, by cutting the N. trigeminus between the ganglion and the pons and evulsing the central end without removal of the ganglion, as when the ganglion itself is excised.

Local Anesthesia of Fingers and Toes.

Schleich (*Berl. Klin. Woch.*, March 26, 1900, p. 270) deprecates the idea of securing regional anesthesia by the sole use of even concentrated solutions around the base of fingers and toes, since centripetal conduction through the bone-marrow is not affected by these injections. It requires the adoption of elastic constriction to secure peripheral anesthesia, which is traceable not to regional insensibiliza-

tion of the nervous elements, but to gradual infiltration of the isolated segment with the injected anesthetic.

Schleich recommends the following technique: Into the skin surrounding the base of the finger inject from five to ten grains of 2-to-1000 solution, and upon the anesthetic field circumscribed by the annular infiltration apply an elastic band. Within thirty seconds the artificial edema will be seen to displace itself toward the periphery, and the pale anemic discoloration of anesthesia gain upon the remaining tissues. A new series of injections may now be made into the anesthetic field, the constricting band shifted nearer toward the extremity, and soon we notice how the cyanotic discoloration gives way before the anemic infiltration wave. Less than five minutes is sufficient to thus anesthetize a whole finger. The process can easily be extended to surgical interventions upon the hand, arm, and leg.

A New and Simple Method of Sterilizing Catgut.

C. A. Elsberg (*Medical Record*, May 5, 1900) gives a method for sterilizing catgut. The writer says that the catgut should be freed from fat by immersing in ether or chloroform for twenty-four hours and then tightly wound in single layers on suitable spools. The spools are boiled for from ten to thirty minutes in a hot saturated solution of ammonium sulphate in water, made by adding chemically pure ammonium sulphate to boiling water until no more will dissolve. Two-per-cent carbolic acid solution may be substituted for the water if a quicker sterilization (three to ten minutes) is desired; or 1:1000 chromic acid solution, if the catgut is to be chromicized. The spools are thoroughly washed by agitation for from one to two minutes in cold or, better, warm sterile water, carbolic acid, or bichloride solution of any strength. The catgut spools are preserved in strong alcohol. For resterilization the catgut spools are boiled for from five to fifteen minutes in any of the solutions, and washed as described.

Heroin in Surgical Practice.

J. Wiesner (*International Journal of Surgery*, May, 1900) says that in general, on the ground of his observations, heroin hydrochloride is an excellent substitute for morphine, and up to this time has not shown any unpleasant after-effects. It should, however, be given carefully. The writer is in the habit of beginning its internal use with five to ten drops of a one-per-cent solution, equal to $\frac{1}{24}$ to $\frac{1}{12}$ grain, and its subcutaneous use with $\frac{1}{12}$ grain. This dose is usually sufficient, but during continued employment it is necessary to increase the dose one-sixth grain subcutaneously, as must always be done with morphine,

which often must be injected in single doses of one-third grain. A dose of heroin in general is one-half as large as that of morphine, and it has been the writer's custom never to exceed half a grain daily, or a single dose of one-sixth grain.

MEDICINE.

Infection Through the Tonsils, Especially in Connection with Acute Articular Rheumatism.

F. A. Packard (*Philadelphia Medical Journal*, April 28, 1900), in closing an article on this subject says that the tonsils are active and useful organs whose function it is to offer a barrier to the entrance of organisms into the deeper tissues at a point which by its location and construction is very open to infection. The tonsils act in this respect as do other lymphadenoid tissues in the body, as is best exemplified by the lymphatic glands. During the course of and following tonsillitis we may have occurring most of the important complications of typical acute articular rheumatism. This affection is an infectious disease dependent possibly upon no one organism, but upon a variety of bacteria, and the phenomena of rheumatism can be accounted for by toxin absorption, which toxin may be produced by an attenuated microorganism. It is possible that the frequent entrance of the microorganism by way of the throat may explain the fact that we have acute articular rheumatism developing after the invasion of the throat rather than the ordinary septicemia or pyemia, for the reason that just beyond the port of entry there is situated a collection of lymphadenoid tissues capable of restraining the growth and virulence of the microorganism attacking the membrane which it protects. The terms "rheumatic pleurisy," "rheumatic purpura," "rheumatic erythema," and "rheumatic sore throat" should be used with less freedom, and it would be more correct to look upon them as the result of the infection, whether accompanied or not by acute phenomena, rather than as latent, aborted, or incomplete forms of a condition produced by an unknown, mysterious, and intangible rheumatic poison.

The Medical School of the Future.

The medical school of the future, according to H. P. Bowditch (*Philadelphia Medical Journal*, May 5, 1900), which expects to take first rank will be organized and administered somewhat as follows:

1. It will be connected with a university, but will be so far independent of university control that the faculty will practically decide all

questions relating to methods of instruction and the personnel of the teaching body.

2. It will offer advanced instruction in every department of medicine, and will therefore necessarily adopt an elective system of some sort, since the amount of instruction provided will be far more than any one student can follow.

3. The laboratory method of instruction will be greatly extended, and students will be trained to get their knowledge, as far as possible, by the direct study of nature, but the didactic lecture, though reduced in importance, will not be displaced from its position as an educational agency.

4. The work of the students will probably be so arranged that their attention will be concentrated upon one principal subject at a time, and these subjects will follow each other in a natural order.

5. Examinations will be so conducted as to afford a test of both the faithfulness with which a student performs his daily work and of his permanent acquisition of medical knowledge fitting him to practice his profession.

The Acute Pneumonic Form of Tuberculosis.

A. W. Elting (*American Journal of the Medical Sciences*, May, 1900) enumerates the following as the main clinical features of this disease:

1. Onset, very often without a definite chill, though a definite chill may occur.

2. Fever, often of an elevated, regular character, but very frequently of an irregular or remittent character, and practically always of a remittent character in the later stages.

3. Absence, usually, of marked dyspnea and cyanosis.

4. Physical signs which indicate consolidation of a part of a lobe, a whole lobe, or more than one lobe.

5. Pain in the side, with cough and a sputum which is at first typically pneumonic, rusty, and glairy, but which at the end of a week or ten days may assume a greenish tinge and will be found to contain tubercle bacilli. In the case reported tubercle bacilli were found seven days after the onset.

6. Absence, in some cases at least, of the leucocytosis usually associated with acute lobar pneumonia.

An Appeal for Systematic Treatment of Consumptive Poor.

John F. Russell (*New York Medical Journal*, May 5, 1900) in an article upon this subject says that a large number of the poor people suffering from pulmonary tuberculosis in a curable condition cannot

go to sanatoria for treatment, and that a dispensary treatment is practicable, successful, and comparatively inexpensive. The curable pulmonary tuberculosis by dispensary treatment is confined to the early stage, and without organized effort such cases are difficult to attack for treatment owing largely to ignorance of the disease and belief that it is incurable. The treatment should cover a long period, and patients should be required to attend daily. The majority of dispensaries at the present time make no radical provisions for such treatment. The writer thinks that it is the duty of such dispensaries to organize classes for this purpose.

The advantages to be derived from the adoption of this plan of treatment are as follows: Many are cured; all are benefited; all are educated and made capable of protecting and teaching others; all, laboring and idle alike, can come for treatment. In the end it will break down the deep-rooted belief that pulmonary tuberculosis in all stages or any stage is incurable, and lead to the application for relief early in the disease.

Etiology of Malarial Fever.

W. S. Thayer (*Philadelphia Medical Journal*, May 5, 1900) says that it may now be considered proven:

1. That the malarial parasite possesses an extra-corporeal cycle which is completed in the stomach wall of mosquitoes of the genus Anopheles.

2. That members of the genus Anopheles can transmit malaria from infected to non-infected individuals.

There is then reason to believe, says the writer, that if in any given region (1) proper measures for treating the spring relapses of malaria were adopted, and (2) efficient measures for destroying the dangerous mosquitoes in their larval stage could be carried out, the prevalence of malaria might be materially controlled.

The importance to the community of insisting upon the proper treatment of all cases of malaria cannot be too strongly emphasized. An infected patient in a malarious district is a source of danger to those about him.

On the Etiology and Symptomatology of Goitre.

Adami (*Montreal Medical Journal*, January, 1900) believes that the essential cause of Graves's disease differs from the essential cause of ordinary goitre, and that Graves's disease in itself primarily depends upon some nervous or other stimulus acting upon the thyroid gland and leading to increased activity and increased secretion. The sud-

den liberation of some of the retained secretion is best calculated to explain the paroxysmal disturbance of the "Graves" type often met with in the course of ordinary simple goitre, as again does sudden increased discharge or absorption explain the disturbances seen in the course of Graves's disease itself, as well as the dangerous and sometimes fatal results following the operative handling of the diseased glands.

An Experimental Inquiry into Scurvy.

Frederick G. Jackson and V. Harley (*Lancet*, April 28, 1900), who made an extended number of experiments upon monkeys, have arrived at the conclusion, the same as that derived from arctic experiences, that the presence of fresh vegetables or lime juice is not alone sufficient for the prevention or the cure of scurvy, and that due regard must be given the condition of the food in general, and especially a state of preservation of the meat, as the essential factor in the etiology of the disease.

THERAPEUTICS.

Progressive Pernicious Anemia and Malignant Disease of the Stomach, and Their Treatment.

Dr. A. Abrams (*Medical Record*, April 28, 1900) says that arsenic is a true specific in pernicious anemia, and is as certain in its immediate results as is mercury in syphilis, quinine in malaria, or iron in chlorosis. The specificity of arsenic is so great that in no case of grave anemia are we justified in excluding the progressive pernicious variety, even though the blood examination is negative, without a heroic trial of arsenic. Like the other specifics, it produces relative cures, and cannot be regarded as a prophylactic owing to the frequent relapses which occur. It may be given as Fowler's solution, beginning with three-minim doses well diluted after each meal, and increased by one or two minims daily, according to the urgency of the case, until twenty-five or thirty minims is taken three times a day. A safer rule is to push it to the point of toleration and maintain it at this point until the blood examination shows the result desired. The appearance of its physiological effects (edema and itching of the eyelids, gastrointestinal irritation, etc.) is a signal for its temporary discontinuance. When arsenic cannot be given by the stomach, it may be administered subcutaneously or even by the rectum.

In association with arsenic, assimilable food and rest are indispensable adjuvants.

The use of intestinal antiseptics in this as well as in other diseases is a mere therapeutic refinement not sanctioned by bacteriological reasons, and they ought not, therefore, to be employed as a routine measure. In the Italian literature one finds some authentic evidence of the good effects from thymol, its administration being suggested by the theory that pernicious anemia is caused by intestinal absorption of products which are destructive to the red blood-corpuscles.

Iron is not only useless but is apt to create digestive disturbances.

Bone-marrow is said to be curative, but in my experience it induces nausea and aggravates exisiting gastrointestinal troubles.

Gastric disturbances suggest stomach lavage. The character of the food ingested must be determined by the results of a chemical analysis of the stomach contents.

To counteract the great reduction in the quantity of blood (oligemia) weak saline solutions may be given by the colon (enteroclysis) or preferably in the subcutaneous tissue (hypodermoclysis).

Relapses are best prevented by minute attention to dietetic and hygienic details.

Treatment of Asthma.

Dieulafoy (*Nouveaux Remèdes*, April 8, 1900) recommends the following method of treatment. For the threatening attack or the one just starting, paint the nasal mucous membrane as far up as possible with the following solution:

Cocaine muriate	1 part.
Distilled water	20 parts.

Or spray the nose or throat for about five minutes with a tablespoonful of the same solution. This will often abort an attack. If unsuccessful, inhale strongly from a handkerchief six to twelve drops of pyridin. If the attack is at its height, inject half a hypodermic syringeful of the following solution:

Morphine muriate	0.10 centigramme.
Distilled water	10 grammes.

Should the attack persist, inject another half-syringeful fifteen minutes later.

Potassium iodide has proven itself the treatment *par excellence* for constitutional asthma. It should be given in doses of 25 centigrammes (4 grains) *ter in die*, and increased gradually to one and even two grammes (15 to 30 grains) in cases of inveterate asthma.

Three remedies are useful to counteract the asthmatic diathesis—potassium iodide, belladonna, and arsenic. They are exhibited as

follows: For about two weeks take from one to two grammes of the iodide of potassium a day. For the next two weeks take at first one-half and then a whole pill of the following composition:

Powdered belladonna leaves.....
Extract of belladonna.....ää 1 centigramme.

At the same time take once a day one teaspoonful of the solution of

Arseniate of sodium..... 5 centigrammes.
Distilled water..... 80 grammes.

Emphysematous patients are benefited by the concurrent use of compressed air inhalations.

Antityphoid Vaccine in Gonorrhea.

T. Wilson (*British Medical Journal*, April 28, 1900) reports the following case in which antityphoid serum appeared to have a favorable effect on gonorrhea:

"A member of the City Imperial Volunteers on his way to Cape Town consulted me complaining of great pain on urination; the lips of the meatus urinarius were red and swollen; there was a copious discharge of a thick, yellowish-green color. I had arranged to inoculate forty volunteers on the following morning with antityphoid vaccine, and the patient's name was on the list. At 10.30 A.M. on January 25 I inoculated the patient in the groin with 1½ cubic centimeters of antityphoid vaccine; perfect rest was ordered for the two following days. The temperature in the evening was 100.8° F., and on the following morning 98° F. The lymphatics of the groin and penis were red, swollen, and painful to the touch. The glans penis was swollen, and of a bright-red color. There was no longer pain on urination. The discharge had ceased to flow on the evening of the inoculation. After three days the inflammatory trouble disappeared, and when I last saw the patient on February 4 the parts were perfectly healthy."

Disguising the Taste of Castor Oil.

W. Washburn, in a communication to the *Journal of the American Medical Association* of May 12, 1900, gives the following method for administering castor oil or cod-liver oil so that the taste is not discernible: Fill the mouth with milk, and hold it there. Dip up a tablespoonful of milk and pour into the spoon already full of milk about a teaspoonful of oil, whether cod-liver oil or castor oil, and it will be seen that it displaces milk to the extent of its bulk, as any other liquid would do, but the globules of either of these oils being different from

the globules of milk do not mix with the latter, and the oil will be in a round ball not touching the spoon. As the patient swallows the milk that has been held in the mouth, he should take the spoonful of milk in the mouth, and at once begin to drink milk from a cup at hand. The writer says he has never yet found a person who, with the procedure carried through in this manner, could tell whether he had taken castor oil or cod-liver oil, or none at all. There is absolutely no contact with the mouth or throat of any particle of the oil, nor can it be smelled upon the spoon. The oils as well as the milk must be cold, and the colder the better.

Treatment of Lupus and Skin Diseases with X-rays.

Albers-Schonberg and P. Hahn (*Münch. Med. Wochenschr.*, 47, 1900), in a lengthy paper on the action of the *x*-rays upon diseased and healthy skin, arrive at the following conclusions:

1. *X*-rays act favorably upon lupus and other skin manifestations.
2. They remove concomitant eczema and elephantiasic infiltration around the lupus, and
3. Are consequently of value when we have to treat flat, large surfaces.
4. Relapses occur with this method as well as with others, and
5. Other methods are not excluded when *x*-rays are applied.
6. By judicious use and sufficient technical knowledge all the undesirable after-effects, as dermatitis, excoriations, gangrene, etc., are surely avoided.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

A Leech in the Larynx.

Dr. Tsakyroglous (*Monatsch. für Ohrenheilk.*, vol. xxxiv, No. 1) reports another case of leech in the larynx. The same writer has previously reported two similar cases. In this present instance the patient, a merchant, forty-five years of age, complained of blood-spitting and difficult respiration. His residence was usually in Smyrna, but a few days previously he had gone into the interior, and remembered having drunk some spring water, and thought at the time that he had swallowed a leech. With the laryngoscope the leech was discovered in the larynx fastened at the base of the epiglottis just above the vocal cords. It was removed with Fauvel's forceps. This leech was not the ordinary *Hirudo medicinalis*, but the *Hæmopis*

sanguisuga, which species is prevalent in the country thereabout, and is popularly known as the *Saingsue militaire* on account of the two red stripes on the side of its body. This leech is found in many places in the province and also in Constantinople, and when it is small is often taken into the throats of horses and cattle when drinking, and sometimes swallowed by men. This one had been eight days in the larynx. In the other cases published it had remained twelve days. In another instance which the writer mentions a leech had remained six months attached to the posterior pharyngeal wall behind the choanæ.

A Molar Implanted in the Orbital Wall of the Left Maxillary Sinus.

M. Liaris (*Revue Hebdomadaire de Laryngol*, etc., vol. xxi, No. 16) presented before the Medical and Surgical Society of Bordeaux a patient with an interesting condition of ectopic dentition. It was a case in which a molar was lodged in the left maxillary sinus. When the patient was first seen he presented an asymmetry of the face analogous to that accompanying ulcerating teeth. Palpation disclosed a tumefaction in the superior part of the upper maxillary sensitive to pressure In the mouth one perceived a reddened, bulging, irregular mass which bled slightly. The orbital wall of the sinus was slightly elevated and roughened. Transillumination of the sinus disclosed a cloudiness, and lavage after puncture removed a slight amount of pus. The first impression was that a neoplasm had developed in the maxillary bone or within the cavity. After a few days, during which detergent injections and applications were made, the sinus was opened, and a well-formed molar was found in the posterior part, located on the wall of the sinus, embedded in the orbital face.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Surgery of the Mastoid; Indications for the Operation.

Muller, of Berlin (*Deutsche Med. Woch.*, April 12, 1900, p. 245), in reviewing the indications for the operation emphasizes the statement which he made in 1898, that each case of middle-ear abscess which despite appropriate treatment continues for more than two weeks with unabated intensity, and without any showing of improvement, should be treated by opening of the mastoid, even in the absence of threatening symptoms. He wishes, however, to have the statement qualified,

insomuch as the indication is not strictly absolute but should be considered as relative. To begin with, he does not have in mind the radical operation, but the chiseling of the mastoid process, which bears to the former about the same relationship as the opening of a felon bears to amputation of the finger. The sooner, all things being equal, we proceed to open the mastoid, the less will be the existing lesions, the smaller the opening required, the shorter the convalescence, the less formidable the operation.

On the other hand, cases which despite appropriate management offer no sign of improvement after two weeks most always present other indications for trephining, *e. g.*, rise of temperature, bulging of the posterior wall, sagging of the upper wall of the auditory canal, tenderness over the mastoid, edema, etc.

Muller further emphasizes the statement that protracted suppuration of the middle ear, even when unaccompanied with a threatening symptomatology, is not at all the indifferent infirmity which the laity and even some professional men believe it to be, and that aside from the noticeable influence which protracted suppuration may have upon the general welfare we should remember the possibility of dangerous and even lethal complications (thrombosis of the sinus, encephalitis, etc.). He therefore concludes that his rule, as stated above, holds good within proper limitations.

Dry Treatment of Middle-ear Abscess.

Richard Muller (*Deutsche Med. Woch.*, No. 15, p. 246) advises introducing into the carefully cleansed auditory canal a strip of absorbent gauze over which is placed a large pad of the same dressing material. The dressing is to be changed once, possibly twice, in twenty-four hours. By this means he secures a sufficient continuous drainage and has the advantage over the method heretofore in use (of removing the strip of gauze as soon as saturated) that the patient is subjected to less disturbance; that drainage proceeds all right without requiring frequent renewal of the strip of gauze; that the attending physician does not have to rely on untrained help for a renewal of the drain; and last, but not least, that a possible lesion of the softened auditory canal—with its concomitant complications—at the hands of untrained attendants is no longer to be feared.

Epilepsy of Aural Origin.

Lannois, of Lyons (*Journal of Laryngology*), gives the history of a patient aged twenty-six, of tuberculous inheritance, but without any pulmonary symptoms, who was attacked with double otorrhea at the

age of seven, and epilepsy at the age of thirteen. When he presented himself for treatment in April, 1897, he had, as a rule, an epileptic attack every week. One ear had cicatrized, and had been dry for some time. The other ear was still suppurating, the drum being entirely destroyed, cicatrizing in part, but with two ulcerations below and in front. Cure was obtained in a few weeks, and the hearing for the watch, which had been only on contact, improved to twenty-five centimeters. At the same time the epileptic attacks disappeared, and in March, 1899, the patient returned of his own accord to say that he had remained cured ever since, and that his ears were quite dry. During the year 1898 he had only had two slight attacks of vertigo, the last being in the month of August.

Cases like this, where the action between the otic lesion and epilepsy appears well marked, are very rare. It is this fact which gives the interest to the case, and shows the importance of treating the ears when they are affected in epileptics.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Forceps on the Aftercoming Head.

Referring to the management of breech presentations with retention of the aftercoming head, Professor Budin, of Paris, France (*Union Méd. du Canada*, April, 1900, p. 229) quotes Schroder, Tarnier, and Pinard, who believe that all such cases can be terminated by Mauriceau's maneuver (traction upon the lower jaw with two fingers passed into the mouth).

Heretofore Budin was of Tarnier's opinion, but has recently concluded, as previously set down by Levret, Smellie, Baudelocque, and others, to try Mauriceau's maneuver first and use forceps in difficult cases.

He ascribes cephalic dystocia in breech presentation to one of three causes: (1) Contraction of the cervix around the fetal neck; (2) abnormal resistance of the perineal structures, so that the unaided hand cannot overcome the contracted levator ani muscle; (3) antero-posterior narrowing of the inferior strait.

Mauriceau's maneuver requires a pull upon the lower maxillary, and experience has taught that a traction force of thirty-five pounds or over is unsafe.

The forceps blades spreading over a larger surface allow the use

of much greater traction without subjecting the child to the same dangers (lesions of the mouth and jaw, fracture of the clavicles, consecutive paralysis of the arm). Accoucheurs who deprecate the use of forceps on the aftercoming head object on the score, first, of loss of time entailed, and secondly, of the difficulty of the operation. The first argument is nugatory, more precious time being lost in attempted manual maneuvers than in successful forceps delivery. As to the second objection, Budin holds that no form of instrumental delivery is more easily effected than the one under consideration. Either the occipital bone is under the pubic arch or in the sacral concavity. In the first instance, which occurs nineteen times out of every twenty cases, have an attendant lift the child's body out of the way, place the blades one after another, articulate, and pull during pains.

Should the occiput be lodged in the sacral concavity, (1) if the head is deflected follow the same method, disengaging the occipital protuberance from under the sacrum; (2) if the head is still deflected depress the child's back toward the mother's and apply forceps from above, so that chin, face, and forehead may be born in succession.

A Palliative Operation for Inoperable Carcinoma of the Womb.

Kustner (*Centralblatt für Gynäkologie*, April 7, 1900, p. 361) describes an operation devised by himself and intended as a palliative in cases of inoperable carcinoma of the uterus.

With scissors and thermocautery he removes as much as feasible of the necrotic cancerous tissue and inserts into the vagina a tampon saturated with alcohol. He then creates a large rectovaginal fistula, the edges of which he sutures with catgut. Through this opening and through the anus he leads the tape holding the tampon. He now denudes as much as possible of the vestibular portion of the vulva and approximates the sides, thus closing the passage with silkworm-gut. On the fourth day after the operation he removes the tampon per rectum. Any fistulæ due to stitch-abscess are to be closed as early as possible.

The obvious advantage of this procedure lies in the possibility of subjecting the extrusion of offensive discharges to the control of the anal sphincters, and to enable these unfortunate patients to remain in their families without awakening uncontrollable disgust. The artificial fistula should be kept patulous, and disinfectant—non-poisonous—irrigations may be made for the sake of cleanliness. Several cases which he subjected to this operation have proven most satisfactory.

THE MEDICAL AGE

VOL. XVIII. DETROIT, JUNE 10, 1900. No. 11.

ORIGINAL CONTRIBUTIONS.

IMPETIGO ADENOSA.

BY N. E. ARONSTAM, M.D., PH.G.,

Clinical Assistant of Dermatology and Venereal Diseases, Michigan College of Medicine and Surgery, Detroit, Mich.

Ten cases of a peculiar type of cutaneous affection, occurring in my private practice, have prompted me to issue the present article. To my knowledge the subject under consideration has never been described or mentioned in any work on skin diseases, nor was I able, by diligently perusing the dermatological literature, to obtain any definite data in regard to this subject. I do not pretend to be the discoverer of the above dermatosis, nor do I make any claim to the origination of the title; but as I was ignorant of the terminology of the malady, I have no other alternative but to name it "impetigo adenosa," for its close resemblance to contagious impetigo. I pray that the pardon of the profession be granted to me for the liberty taken in creating a new subject. Impetigo adenosa is an acute, contagious, febrile affection, characterized by the eruption of pustules and accompanied by the enlargement of the lymphatic glands in their various situations.

Etiology.—The disease is no doubt contagious, but what the contagious principle is I am not able to state, not having had any recourse to systematic bacteriologic research. Suffice it to say, however, that members of the same family—as witnessed in three of my cases—were consecutively affected with it. But not only this, also tenants of the same house and dwellings of the immediate vicinity or neighboring streets were attacked by this malady. This conclusively proves the infectious nature of the disease and that it may be transmitted from one individual to a second, and from one locality to another.

Age is a prominent factor or predisposing cause, for the cases coming under my observation occurred in children between three and ten years of age. The proportionate relation which sex plays in this disease is seen in the six male and four female cases. The majority of the children affected were of the strumous diathesis. The outbreak of this disease occurred in the early part of April, a period exceedingly fluctuating in its meteorologic manifestations. It may not be out of place to state that all the cases were successfully vaccinated at least one year previously. Seven of the children were brunettes, the remainder blondes. The previous history of the patients, as far as I could obtain it from the parents, was apparently negative.

Symptoms.—The disease was ushered in with vomiting, of a very protracted type, and a decided chill in seven of the cases. The remaining three had occasional twitchings of the muscles of the face and legs. The chill and convulsive movements were as a rule transitory; the former lasting only about an hour, and never recurring during the course of the disease. This was followed by pyrexia, the thermometer registering between 101° and 104° F. in the axilla at various intervals of time. The skin was hot and dry; the pulse was rapid and small, ranging from 120 to 140 per minute; the respirations were hurried and shallow; the tongue was heavily coated, but moist; the buccal and pharnygeal mucosa normal; the breath heavy and offensive. Fine, small, moist râles could be heard all over the anterior surface of the thorax, with an occasional area of dry, rough breathing. The cardiac sound was fast and weak, but otherwise normal. The abdominal viscera showed no signs of abnormality, as far as percussion and palpation could elicit. In one case, however, the spleen seemed to be somewhat enlarged. Anorexia was marked and constipation predominating, although two of the cases had a severe attack of diarrhea at the outset, as well as through the entire course of the malady.

All of the patients complained bitterly of pain in the joints, especially in the posterior tibial muscles. The children lay prostrated in their beds, listless, apathetic, with flushed, sunken, and haggard features—a picture of a typhoid state. In short, the systemic disturbances would all point towards a grave malady. This stage of invasion—if I might term it thus—lasted from two to three days, after which the exanthem appeared in the form of pin-head-sized pustules, situated only upon the exposed portions of the body, as the wrists, hands, neck, face, and forehead. In the latter situation they were thickly strewn. In one case the eruption was discretely scattered upon the back and chest. The pustules were glistening and contained a yellow, translucent fluid. Surrounding each individual pustule was an erythem-

atous zone of a vivid, scarlet-bright color. Simultaneously with the appearance of the eruption the lymphatic glands of the groin, axilla, and neck began to enlarge, some of them even attaining the size of a small hen's egg. They were so tender and painful on pressure that the children would almost scream whenever the glands were palpated. In one case the posterior cervical lymphatics assumed large dimensions; thus, the neck looked as if surrounded by a thick, brawny, indurated, semicircular band. The cervical and inguinal glands were the most prominent and painful ones, the axillary being second to them in prominence and less painful. Fluctuation could never be detected in any of them. The fever and systemic disturbances during this stage of the disease were the same as at the onset; no abatement whatsoever could be noticed.

After the lapse of a day or two the pustules increased in size and the glandular enlargement became more prominent. Finally the pustules ruptured. With this, the febrile and constitutional phenomena gradually began to decline, and the patients expressed some desire for food. The picture of the lesions after the maturing and rupturing of the pustules is worth noting. The contents of the latter dried up and changed into "stuck on" crusts of a yellowish hue. Encircling the latter was a somewhat raised border of a mahogany tint, which in its turn was surrounded by a deep-red area. Intervening patches of healthy skin gave to the face and hands a peculiar speckled appearance. After three more days the crusts fell off, the mahogany and red areolæ gradually disappeared, and in lieu of the former lesions a normal, healthy integument could be noticed. The hands and wrists were the first in order to participate in this *restitutio ad integrium*, after which the face and forehead followed. The children during this declining stage felt quite comfortable; the tongue cleared up and the appetite returned; the pulse became slower and stronger; and the disease was ultimately brought to a close. This was not the case with the glands, however. They remained more or less painful and indurated a week or ten days after the complete disappearance of the entire group of symptoms. The enlargement of the axillary lymphatics was the first to disappear, after which that of the cervical and inguinal glands respectively followed. The entire cycle of evolution and involution of the lesions was completed in from sixteen to eighteen days.

At the conclusion of the symptomatology of this disease, I must not omit to mention that subjective symptoms, as burning, itching, and smarting, were invariably present in all of the ten cases. Itching was at times quite excessive. The latter coincided with the lesions until their final disappearance. Complete recovery was always the rule. No complications or sequelæ of any account accompanied or

followed the malady, except in one child, in whom alopecia made its appearance, and proves so far rebellious to treatment. The children at first looked thin, anemic, and considerably emaciated, but regained their strength and former health and *bien-être* in a very short time.

Treatment.—Nothing seemed to influence or shorten the progress of the disease. I presume it is self-limited, and medicine will have little or no effect upon the course of the malady. I had to resort to a purely symptomatic treatment. As constipation was invariably present in the majority of the cases, a few doses of calomel at the outset acted admirably in producing the desired evacuations. Vomiting is another annoying symptom demanding our attention, but in spite of considerable quantities of bismuth subnitrate and teaspoonful doses of aqua calcis, it resisted every effort at abatement. Repeated sponging, and a simple diuretic fever mixture of aconite, liq. ammonii acetatis, and sp. æth. nit., were sufficient to combat somewhat the high pyrexia. The ice bag to the head did well in relieving the cerebral symptoms. Systematic feeding is very essential, and consisted of well diluted milk and broths administered at regular intervals. Iced lemonade was always relished by the patients and was given *ad libitum*. The itching and burning of the cutaneous lesions were relieved by an ointment of zinc oxide, ichthyol, and menthol (the latter of a one-per-cent strength), applied *bis in die* during the entire presence of the exanthem. The swollen glands were kept constantly in contact with gauze, saturated with a solution of liq. plumbi subacetatis and tinct. opii. I think this had no effect whatsoever. Later on, however, iodine in ointment form was tried, and acted more beneficially. During convalescence an emulsion of cod-liver oil with the hypophosphites and the syrup of ferrous iodide was prescribed. Under the latter régime, with plenty of fresh air and outdoor exercise, and wholesome, nutritious, and easily digestible food, the children rapidly regained their former strength.

THERAPEUTIC SUGGESTION.*

BY PROF. JAMES B. BULLITT, M.D.,

Formerly Clinical Professor of Orthopedics in the Hospital College of Medicine, Louisville, Kentucky.

This little girl, M. B——, white, aged ten years, presents an unusual affection, one not frequently seen. The case has been one of unusual interest to me, and I thought might be likewise interesting to the class.

This little patient appeared at our clinic one and a half years ago with a decided limp in the right leg. Upon examination the cause of

*Clinical lecture delivered at the Hospital College of Medicine, Louisville.

the limp appeared to be located in the knee—at least, this was the impression gained at that time. She had a history of having had a fall, and the presumption was that there had been a slight contusion of the joint, and as a result there had occurred a certain amount of synovitis, with the limp as a natural consequence. No swelling could be made out about the joint; limitation of movement, however, was more or less pronounced, and a considerable amount of pain was complained of.

Supposing it to be a genuine case of contusion of the knee-joint as a result of the fall, the limb was fixed in a plaster-of-Paris dressing for two weeks and the child kept off her feet, the assumption being that by rest it would be quite possible to relieve the child of the symptoms of which she complained. At the end of two weeks this dressing was removed, and it was found that the knee was in no better condition than before; at the same time the objective symptoms were no more pronounced—no more swelling could be seen than had existed previously.

About the same time the child began to complain of pain in the hip. She was advised to go home and keep off her feet for a certain length of time, when improvement would probably take place. She then disappeared from our observation. We learned that a few weeks later she was admitted to the Louisville City Hospital, where she remained for two months, and where she was treated by rest and a fixation splint, the presumption being there, as it had been with us here, that the child was really suffering from joint disease, first of the knee and later of the hip.

She left the City Hospital at the end of two months in practically the same condition as when admitted. She was then taken to the Children's Free Hospital, and I was again asked to take charge of her. At this time the pain was referred more especially to the hip than to the knee. You will probably remember that you have been repeatedly told that in true hip-joint disease pain is frequently referred to the knee. It is not infrequently the case that we find pain at first manifested at the knee rather than at the hip-joint proper, so that the appearance of pain in these two situations was characteristic of hip-joint disease.

There was no atrophy of the limb further than that which would naturally result from the fixation to which it had been subjected, and the fact that the child had favored this limb on account of pain which she said was present. In true cases of hip-joint disease atrophy is apt to be more marked, especially where the disease has persisted for such a great length of time. However, it was thought best to put the child in bed and immobilize the limb by putting on a Buck's extension.

The patient gave evidence at this time of some little peculiarity which can scarcely be defined; the child impressed one as being different from other children; it was evident that she was not quite equal to other children of this age in some respects, which as I have said can hardly be defined. She also complained of pain above Poupart's ligament about the right ovarian region, which is quite unusual in hip-joint disease. This, together with further observation of the child, caused us to become convinced that she was really suffering from no form of joint disease, but that she had what is known as a neuromimesis, a term signifying an imaginary form of disease, the so-called hysterical joint of some authors. With this idea in mind I tried several severe forms of treatment by blistering, the use of the cautery, etc., for the moral and psychical effect, without any beneficial result. The child would be apparently better for a short time, and would then complain in exactly the same way as formerly.

There was at all times a resistance to motion—*i.e.*, if you attempted to move the limb the child would resist and complain of pain, but if her attention was attracted to something else motion could nearly always be imparted to the joint without the patient complaining of pain. This was another factor in determining that there really existed no hip-joint disease. The child was then anesthetized, and it was found that under chloroform all joint stiffness disappeared entirely; motion was free in every direction, showing that whatever might be the condition of the joint there were no changes which resulted in restriction of motion. This further confirmed the evidence we already had that there was really no joint disease.

I tried at first the suggestive plan of treatment—that is to say, by means of cautery and other agents which blistered the surface, etc., which would attract the child's attention and cause her to believe that we were doing something for her relief, to render her less susceptible by suggestion in the waking state to the mental idea she had of joint disease; but all these remedies were without appreciable effect.

At last I conceived the idea that I would attempt to hypnotize the child, and in the hypnotic state see if she could not be made much more amenable to suggestive therapeutics. I know that some of those present to-day heard Professor Lee (the professional hypnotist) deliver a lecture upon hypnosis not long ago. He explained its various features in a very fair and sensible way, and also suggested the uses to which it might be put in therapeutics. He showed very clearly that some of the popular ideas concerning hypnotism were entirely erroneous, the common belief being, as was believed by Mesmer, who was the first to call attention to hypnotism, which was therefore termed mesmerism, that the hypnotic influence is an essence,

so to say, which is capable of passing from one body to another, affecting the second body, etc. Mesmer seemed to have the idea that there was a certain etheric influence which was really capable of emanating from his body and coming in contact with other people, producing in them certain effects—that it was the dominative power of one mind over another, etc. Professor Lee told you that this was absolutely untrue, that he induced the hypnotic state by exciting the patient's imagination; and this is really the secret of the entire procedure. Of course, the personal characteristics of the operator amount to a great deal, just as personality counts for much in any relationship of life. A person who has a certain amount of dramatic power, gifted with a force of speech which impresses his audience, can succeed best in producing the hypnotic state; but outside of this there is absolutely nothing in the power that is exercised by one mind over another. The patient really produces these effects upon himself. You will remember Lee said that his function in the whole matter was to stimulate and excite the imagination of the patient up to such a point that suggestions became accepted as realities. He said that he had made people believe that a coin was red-hot, and it really was as far as the mind of the patient was concerned, for on taking up the coin in the palm of the hand the effect of the supposed heat would be to produce a blister. To any one unfamiliar with the subject this would sound like drawing too far upon the imagination; I am thoroughly convinced that it is true, because we have ample affidavits from reliable men that such is really the case.

I remember a report by Liebault, who was one of the first to advance the modern ideas of hypnotism; he told a woman, who was very susceptible, that he intended to produce a blister on her hand. Accordingly an ordinary postage-stamp was stuck on the back of her hand, and she was assured that it was a fly-blister; in a few hours, when the stamp was removed, a perfect blister had resulted.

All of these things suggest to our mind that simply by exciting and stimulating the imagination of the patient, either in the waking or the so-called sleeping state, perhaps every now and then we can run across a case which cannot be controlled otherwise, but which can be very readily and effectually influenced in this way.

We are to start out, however, with an understanding as to the limitations and restrictions which should be exercised, and also as to our own abilities in the matter. I think it is bad enough to deceive our patients, but it is worse to deceive ourselves.

In considering the effect of suggestion upon people in the sleeping state, in the condition of hypnosis so-called, we must first turn to the well-known susceptibility in the waking state. I take it you have all

had experiences which have demonstrated to you that you are more or less susceptible to influences of this kind in the waking state. You are familiar with the story of how a number of college boys put up a job on one of their classmates by which they made him sick. He was known to be an exceedingly high-strung, nervous individual, and the others conspired to make him ill. They had it understood between them that each would meet him on the street a certain morning, and each in turn would tell him how badly he looked, to see what the effect would be. To the first he replied that he never felt better in his life; to the second he said he was not feeling extremely well; to the third that he had been feeling badly all the morning; and by the time he had encountered the fifth man he said he felt so ill that he believed he would go home and go to bed. We all know that a similar power is attributed to the physician; we always hear a bright and cheery physician spoken of in terms of the greatest praise. The physician who is bright and cheerful, and who goes into the sick-room with a smile and assures the patient of continued improvement, is almost certain to achieve success, and the converse is also true. All these things are simply the results of suggestion in the waking state, and we must remember of course that individuals are very different in this respect. Some of them are extremely susceptible; you can make some people believe anything. We have only to read our daily papers and look over the list of advertisements of the various remedies which are guaranteed to cure everything, to realize the gullibility of the public, and practically this gullibility is only another name for susceptibility to suggestion in the waking state.

Now, it has been found, without attempting to go into details, that there is a certain state into which a large majority of people can be thrown by those who understand the art and its proper operation, which is known as hypnotic sleep, and in this condition susceptibility to suggestion is very much increased. While in this state any kind of an idea can be forcibly impressed upon the person. He can be made to believe that water is wine or whiskey; he will drink and feel exactly the effects of alcohol, and be so firmly impressed with the idea that he will become drunk from drinking simple water. There are a thousand and one manifestations which can be induced in this way. Inability to observe pain can be produced, complete anesthesia, so that a capital operation, such as amputation of the thigh, or a laparotomy, can be performed practically without any suffering on the part of the patient.

I take it that you are all more or less familiar with these facts, and the principal feature to which I wish to direct your attention is that there is no peculiar power emanating from the individual which envel-

ops or affects the patient, but it is simply a stimulation of the imagination of the patient in such way that he accepts these various things you present to his mind, and since he accepts them as true they become true so far as he is concerned.

This little girl was hypnotized in a very quiet kind of way, and the suggestion was made to her on two or three occasions that this affection did not exist, that she was perfectly well, that she could get up and walk without any limp, without pain; and after two or three séances of this kind she became perfectly well in fact, and has not uttered a complaint since. She walks without the slightest limp, as you will observe.

I became interested in this subject several years ago, and when in Europe took the trouble to visit Nancy for the purpose of inspecting the school there established by Bernheim. I did not find Bernheim, but saw his assistant, who showed me several cases in the institution. I remember one very striking case, a little girl six years of age, who had been to church eight or ten months before, and coming out of church had slipped on the smooth pavement and fallen down. A crowd immediately gathered around her, and very naturally some one remarked, "Why, the little girl has seriously hurt herself; she cannot walk," etc. This was a suggestion in the waking state, and the child was apparently unable to get up; she could not take a step. She was treated by various means under the supposition that she had some serious affection of the limb, and after a number of months she was perfectly helpless on one side. After this considerable lapse of time she was taken to Bernheim's hospital and placed in his ward. She was hypnotized very readily, and immediately the suggestion was made to her that there was nothing the matter with her, that she was perfectly well and could get up and walk, that there was nothing the matter with her leg. She arose and walked, and could have taken up her bed and carried it too, and thereafter remained well. In other words, the child had gotten the conception in her mind that she was paralyzed on one side, whereas the fact was there was nothing the matter with her, and she was cured in this way.

In attempting the practical application of a measure of this nature we have to be quite careful for several reasons. In the first place the public looks somewhat askance upon hypnotism, believing that it savors of quackery, and we are not in position to give them any definite ideas of what it really is and how it operates, etc. It may be said, however, that a large majority of the educated public nowadays is beginning to realize that there is something in hypnotism besides quackery. Secondly, it must be remembered that hypnotism in the hands of improper persons might be used for working

considerable injury. A person who had the willingness or desire to prejudice an individual has good opportunity by throwing such an individual into this hypnotic condition, which renders him for the time being practically helpless, and the operator might acquire such an amount of power over him by posthypnotic suggestion as to have a certain amount of control over the actions of the individual. It is also possible that in the hypnotic state an individual could be completely overpowered. For all these reasons it is absolutely essential that when a person is hypnotized three or more persons should be present. Again, no one should submit to hypnotism unless he is thoroughly conversant with the hypnotizer and knows him to be an individual who is thoroughly reliable and responsible. For all these reasons I believe the therapeutic value of hypnosis is comparatively limited, yet every now and then I have found a case in which I have succeeded in hypnotizing the patient, and I have had good results from such treatment.

This little girl was comparatively easily hypnotized and in a simple way, by being assured that she would not be hurt; that I was simply going to put her to sleep. This was repeated several times, and the suggestions made to her as already outlined, with the result of perfect restoration as you have seen.

To illustrate what I have said the hypnotic state will be quietly induced, and this little patient will be put to sleep before you. The first thing, of course, is to get the attention of the child absolutely and thoroughly; try to have the patient in a comfortable attitude and as thoroughly at ease as possible; it is a good plan to have him clasp the hands and hold them tightly. You will see that there is nothing dramatic about the procedure, and that the child has been hypnotized very quietly. She is not in a very profound hypnotic state, but even now you will observe the cataleptic phenomena are well marked; the limbs will remain rigid in the position in which placed. That is as far as I have ever attempted to carry the hypnosis in this patient; in other words, I have never experimented with her to see how far the manifestation could be carried. The condition in which you now see her is sufficient for the purpose of suggestion, and is consistent with perfect safety to her. This is what is known as the first stage, the stage of catalepsy. Of course, in making a demonstration, as most of us have witnessed in public performances, it is always necessary to get a good subject who may easily be carried to the various deeper manifestations of the condition. It is possible that the patient before us would not make a good subject, as she is not gifted with a very large amount of imagination. Simply in the state in which you see her now, by making the suggestion to her that she was all right, insist-

ing upon the fact that there was nothing the matter with her leg or hip, she has been completely cured of the neuromimesis, as I have described, which was first thought to be hip-joint disease.

You will notice the peculiar expression of the child's face, the manifest sleepy look about it, which is quite characteristic, as she is brought from under the hypnotic influence. She feels as if she were waking from a profound sleep; this is the evidence given by the majority of those who have been hypnotized. You will notice that before bringing this girl out of the hypnotic state I made the suggestion to her that she would feel perfectly well when she awakened. In a case of this kind it is always well to make a suggestion of that nature, simply repeating the treatment that has previously been practiced.

As I have told you, this is not intended as a dramatic exhibition, but simply to show you the quiet way in which hypnosis can be induced when thought advisable as a therapeutic measure. I will say also that this is exactly the manner in which Bernheim proceeds. Tell your patient to fix his attention upon the operator, and assure him that you are simply going to put him to sleep. If you will watch the lids carefully you will see that they soon begin to droop, and in a few minutes the patient is asleep. You will find that the great majority of people can be hypnotized.

In a large number of minor affections treatment by suggestion may be practiced without hypnotizing the patient. I remember distinctly one lady I saw only recently. She suffered from terrific headaches, and her physician was in the habit of administering morphine to relieve them. Her physician being out of the city I was summoned, and found her exceedingly nervous and suffering from one of her usual headaches. It was so severe that she was utterly unable to remain quiet. I sat down by her bed and told her that I would attempt to relieve her headache without giving her any medicine. Simply stroking her forehead I told her that relief would come in a few minutes, and she would become perfectly quiet and go to sleep, telling her that I had the power in my fingers of rubbing her headache away, etc. In ten minutes it was entirely relieved, and in five or ten minutes more she went to sleep and slept all that night, which she had not done for several nights.

Of course, when a terrific headache can be relieved by simple measures of this character, you can understand it is better than giving a chronic invalid such a drug as morphine, because such people become very readily addicted to the habit, which as you know is sometimes disastrous in its results, and it further gives you a very considerable influence over such a person if you choose to make use of it in

that way, as he attributes to you certain powers which you do not possess.

You will find in practice a great many conditions in which suggestion may be utilized to good advantage, not only in the hypnotic state but in the waking state also.

If this little girl and the simple demonstration I have made shall have served a useful purpose either in giving you new light on the obscure subject of hypnotism, or shall enable you to cure headache or any other manifestation of this nature in your future practice, I shall feel amply repaid for the demonstration.

THE TREATMENT OF SQUINT.

BY EDWARD J. BROWN, M D., MINNEAPOLIS, MINN.

All cases of abnormal deviation of the visual axes are, in the final analysis, cases of squint. In manifest squint the individual has found binocular single vision either impossible, as in paralytic squint, or to be attended with a greater expenditure of nervous energy than he is willing to devote to such purpose, and he has elected to do his work with the eye which under the circumstances is able to do the work easiest, while the fellow eye, having nothing to do, turns in or out and up or down in the line of least resistance.

In latent squint, on the other hand, either the causative elements are less potent or the individual has greater nervous energy and a more persistent determination to enjoy the advantages of binocular single vision; this he accomplishes with more or less physical exhaustion of one kind or another as the price he pays. But if the incentive to single vision be removed, as by excluding one or the other eye, the tendency will usually show itself and the latent squint become momentarily manifest. In the common acceptation squint is supposed to be either convergent or inward, or divergent or outward, but within comparatively recent years upward and downward squints have been recognized; and during the past two years Dr. George T. Stevens has shown us that we may have a double vertical squint, either upward (anaphoria), or downward (kataphoria)—that is, the eyes may be so located in their orbits that the visual lines in the state of rest are above or below the normal plane. In other words, the eyes are placed too high or too low. This determination has come from investigations with the tropometer, an instrument devised by Dr. Stevens to measure accurately the various rotations of the eyes and thus serve as a check upon the results of the phorometer. Dr. Stevens has found by a large number of observations that the normal average rotations should be,

up 33 degrees, down 50 degrees, in and out 50 degrees. In case of decided variations from these averages, which are always to be interpreted in connection with other findings, such as the lateral and vertical deviations, the abduction, adduction, and sursumduction, conditions of abnormal tension are generally found, and these conditions have been found capable of inducing most serious nervous disorders, such as neuralgia, vertigo, chorea, and epilepsy, to say nothing of the general nervous wear and tear, which are greatly increased in a thousand individuals who have nothing of a special localized character to complain of.

The importance of the upward or downward deviation of one eye (the hyperphoria or hypertropia) has been generally recognized for some years, and Stevens has especially emphasized its importance as a causative factor in the production of the lateral heterophorias. Since his discovery of the fact of double vertical squint he has concluded that lateral squints are in great measure the results of abnormal vertical tensions, and consequently curable by the restoration of normal vertical tension. During the past two years or more Dr. Stevens has been testing his cases with a new instrument, the clinoscope, which he described in the *Medical Record* of February 27, 1897. With this instrument he has been able to show that most cases of abnormal deviation are the subjects of torsion—*i.e.*, a twisting of the eye on its anteroposterior axis—and to determine the amount of such torsion in degrees of arc. Further investigation has seemed to show that the torsion has a very important causative relation to the heterophorias.

For some weeks during the past two winters I enjoyed the very great privilege of observing the work of Dr. Stevens in his private office in New York City. Among other cases hardly less interesting was a little girl of about twelve years, with divergent squint of high degree. The tropometer showed great excess in the upward rotations. Partial tenotomy of both superior recti brought about an immediate and very marked betterment of the squint, and later advancement of both inferior recti caused, apparently, its entire disappearance. If such results as these can be expected from carefully measuring the movements of eyes and properly graduated tenotomies and advancements, it would seem that Dr. Stevens has some ground for his claim that the classical treatment of squint by such methods as are commonly taught and practiced is nothing short of criminal. It is commonly admitted that the results are merely cosmetic, since very few such cases are cured in the sense of having the combined normal use of the two eyes. If the patient has two eyes capable of being brought into useful consentaneous use, he should be given such treatment as will afford a fair prospect of such a result.

Children should not as a rule be operated upon till of sufficient age and intelligence to make the subjective examination of the muscles reasonably trustworthy. In most cases that would not be earlier than eight or ten years. In the meanwhile, the squinting eye should be exercised, and its visual power maintained by the daily bandaging, for an hour or so, of the other eye. Refractive errors should be corrected at an early age, and the child required to wear the glasses constantly. This alone will in a certain proportion of cases cause the disappearance of the manifest squint, and this is especially true of alternate squint, in which the two eyes are apt to be not greatly unlike in their refractive conditions.

In manifest squint of adults, where there is not such a degree of amblyopia as to render the attempt to secure binocular single vision futile, the first move should be to develop diplopia. After that is accomplished an effort may be made in appropriate cases to develop the consentaneous action of the two eyes by means of orthoptic exercise; or if that be not feasible, accurate measurements of the muscular condition should be made with phorometer, tropometer, and clinoscope, and the appropriate graduated tenotomies and advancements done at once. The vertical tensions should first be restored as far as possible to the normal, and later, where lateral deviations still persist in spite of such treatment, the lateral muscles must be treated. Dr. Stevens believes that proper attention to the element of torsion in these cases will decidedly increase the number of cases in which the lateral muscles will not require operation.

An interesting case in this connection was one in the service of Dr. Charles Stevens at the eye clinic of the Presbyterian Hospital, a young woman with right divergent squint of about 90 degrees and almost complete loss of the power of convergence. As a child she had had convergent squint, and one of New York's distinguished oculists had operated on the internal rectus. The eye was now in extreme divergence, and clinoscope showed a torsion of 10 degrees. Had the child been properly examined her convergent squint would probably have been found to be the result of hyperphoria, the correction of which would have cured the convergence as well.

This extreme case is typical of much of the work done by most oculists, whose conservatism leads them to adhere to the classical treatment of squint.

In the treatment of the heterophorias or latent squint, exactly the same principles are involved. In a certain proportion of cases healthy individuals may suffer no recognizable inconvenience from a considerable degree of latent error, but even a low degree of vertical deviation may be a serious handicap to one who is wholly unconscious of any-

thing wrong beyond the fact that he gets tired too easily. The prismatic correction of low degrees of error will in some cases afford relief by systematic exercise of the muscles by prism. In most cases, especially of vertical insufficiencies, so-called, the rhythmical exercise by comparatively weak prisms is especially valuable. By this means the muscles may be so toned up that they will do their work with comparative ease, but the exercises must be continued more or less, or the beneficial effects will soon be lost. But at the best the individual has simply been enabled to conceal his error, which still remains, in latent form, acting as a constant handicap in the way of excessive expenditure of nerve force. Permanent relief is only to be secured by such graduated tenotomies and advancements as will bring the eyes into a state of comparative equilibrium.

In the diagnosis and treatment of these cases the most careful and repeated examinations should be made, and with the use of the various instruments, phorometer, tropometer, and clinoscope, which Dr. Stevens has perfected for the purpose, any well trained oculist ought to do satisfactory work.

My own operations, while not very numerous, have been on the whole satisfactory. There have been some brilliant results, and, so far as I know, no failures.

I will report in brief one case. Leah L——, five years of age, was brought to me eight years ago. I found alternate convergent strabismus. The retinoscope showed hyperopic astigmatism 1.50 D. with vision 20–XXX, not improved for distance by glasses. Glasses and atropine were ordered, the latter to be used for some weeks. Her parents were instructed to insist upon the use of both eyes by occasional bandaging if necessary, and to have the eyes operated upon at the age of eight or ten years if the squint persisted. In May of this year she was brought to me, a tall, slight girl of thirteen years, wearing a brace for spinal curvature. Dr. Gillette had insisted that her eyes should be attended to. I found the condition of the eyes practically unchanged, except that the right eye did most if not all the squinting. There was left hyperphoria 2°, esophoria 23°, upward rotation about 30°, downward 40°. After repeated examinations I did a partial tenotomy of the left superior rectus. The immediate result was vertical orthophoria and esophoria 5°; the next day, June 2, vertical orthophoria and esophoria 5°; June 3, esophoria 4°; June 8, esophoria 3.5°; June 13, esophoria 2.5°, hyperphoria 0, right sursumduction 3°, left 2.5°, abduction 1°. The squint is cured and the muscular equilibrium promises to be perfect.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

INTRA-UTERINE IMMUNIZATION TO SYPHILIS.

The tendency of old errors to assume new faces sometimes makes their recognition difficult. An ingenious theory has lately been revived that intra-uterine immunity is conferred on the offspring by the secondary syphilis of the mother. This is certainly not borne out by the clinical facts of the case.

Twenty-five years ago Profeta declared that a healthy child born of a syphilitic mother could be nourished safely by that mother, or by a syphilitic nurse, even though the infection of the mother had occurred before or during pregnancy, and that the transmission of syphilis was impossible from mother to child. This so-called law of Profeta has been somewhat enlarged upon by a certain class of syphilographers and now finds its formulation in the statement that "healthy children born of syphilitic parents are not susceptible of infection." In fact, it is maintained that there is an intra-uterine immunization to syphilis conferred by infected parents.

This theory is not adequately supported by clinical evidence. There is no proof that tertiary syphilis in the mother gives immunity to the offspring, or that an immunity secured by the mother by previous infection is transmissible to the child.

The part of the father is involved in even less obscurity. There has been little question of the ability of the father to transmit syphilis. There is no evidence to show that paternal syphilis in any form confers a complete or even partial immunity to the offspring.

The conclusions arrived at by Morrow may be said to accord best with known clinical facts:

1. A syphilitic man may beget a syphilitic child, the mother remaining exempt from all visible signs of the disease; the transmissive power of the father is, however, comparatively restricted.

2. A syphilitic woman may bring forth a syphilitic child, the father being perfectly healthy; the transmissive power of the mother is much more potent and pronounced, and of longer duration, than that of the father.

3. When both parents are syphilitic, or the mother alone, and the disease recently acquired, the infection of the fetus is almost inevitable; the more recent the syphilis, the greater the probability of infection and the graver the manifestation in the offspring.

4. While hereditary transmission is more certain when the parental syphilis is in full activity of manifestation, it may also be effected during a period of patency when no active symptoms are present.

5. Both parents may be healthy at the time of procreation, and the mother may contract syphilis during her pregnancy and infect her child *in utero*. Contamination of the fetus during pregnancy is not probable if the maternal infection takes place after the seventh month of pregnancy.

The most that can be said in favor of the modern form of Profeta's so called law is that mothers infected before gestation rarely communicate the disease to their offspring after their birth. The seductive conceptions which have led to the consoling theories of intra-uterine immunization unfortunately lack the support of clinical evidence necessary for their substantiation.

EDITORIAL NOTES.

Division of the Specialist's Fee.

Dr. Emory Lanphear, of St. Louis, discusses the salient question of division of the specialist's fee. He makes the following suggestive remarks:

"When an attorney in a county seat has a client in danger of the penitentiary, and hence in need of the very best counsel, it is customary for him to seek some eminent lawyer of a great city and request his aid. Does he approach the distinguished gentleman and say: 'I have a client accused of ——, who is able to pay $3000 for his acquittal; will you take the case with me for this sum, leaving me the gratification of having done my professional duty?' By no means! He plainly states: 'My patron has $3000 to spend for his defense; are you willing to take $2000 of this to join me in securing justice for him?'

"Arrangements of this kind are daily made in every large city. Does any one ever suggest that the country attorney has been doing a dishonorable act in thus securing his city brother to do the major part of the work for $2000, he retaining $1000 for his services? Would a

doctor, sued for $100,000, regard such a transaction as disgraceful, unethical, objectionable, if thereby he were saved this sum?

"But let the question be one of saving life instead of securing liberty or preventing a financial loss, and how different it is!

"If a country practitioner has a patient affected with recurrent appendicitis (upon whom he *might* operate with success but fears possible failure), with a prospective fee of $600, must he—in order to be 'ethical'—write to some city surgeon to come to his help, take all of the $600, and leave him merely the satisfaction of a duty well performed, or possibly pay for a few visits at starvation rates? 'Upon what meat doth this our Cæsar feed that he hath grown so great?'

"Why should not the country doctor plainly say to the city specialist: 'I have a patient with appendicitis who is able to pay $600. Will you operate for $400 and allow me $200 for the preparation, after-treatment, etc.?' What would be wrong about this? Let Drs. Robt. T. Morris, of New York, and Burnside Foster, of St. Paul, who so violently maintain that division of the fee is unethical under any and all circumstances, point out what injustice would thereby be done to (*a*) the patient, (*b*) the attending physician, and (*c*) the eminent surgeon. Why should we not learn a few things from the methods of our most noted lawyers, men who are above suspicion as to purity of motives? Have we not hitherto been too unmindful of the financial interests of ourselves and our professional brothers?

"I maintain that the payment of a 'commission' for all business simply 'referred' to a specialist, or for mere consultations, is probably unethical, certainly demoralizing in tendency; but that division of the fee is perfectly honorable and right when the specialist and the general practitioner jointly share the work and the responsibility."

The Destruction of Rats.

A general and systematic onslaught on rats should be proclaimed, now that the plague has shown a tendency to appear in unexpected places. The New South Wales government is spending $150,000 a month in an attempt to stamp out the disease. A whole army of rat catchers is engaged, and hundreds of rats are consumed daily at the crematory. Increasing rewards will be paid until no rats can be caught. To prevent the carrying of plague, Dr. Apery, of Constantinople, proposes to kill rats on board ship by carbonic acid gas. The gas, being heavier than air, would sink to the bottom of the hold, and there stifle the rodents.

ITEMS AND NOTES.

Montreal is suffering from an epidemic of scarlet fever.

St. Timothy's Hospital, Philadelphia, has just received a donation of $50,000.

Cholera is rapidly spreading in India, and an appalling loss of life seems inevitable.

The Liverpool School of Tropical Medicine will soon send a commission to Brazil to study yellow fever.

Two members of the New York State Board of Health have been appointed a commission on tuberculosis.

Up to the present time there has been over $18,000 subscribed to the hospital for consumptives in Chicago.

The capital stock of the College of Physicians and Surgeons, Chicago, has been increased from $100,000 to $217,000.

The *Memphis Lancet* and the *Memphis Monthly* have become consolidated under the title of the last mentioned journal.

The health department of Chicago has decided that the use of formalin as a preservative of milk must be stopped.

Recently a man in Chicago ruptured a blood-vessel in his head during a severe attack of coughing. Death resulted.

There are five professors at the Moscow University who have served twenty-five years, and who will now be retired.

There were more than 200 members assembled at the International Antituberculosis Congress which opened in Naples on May 25.

The University of California will be presented with a complete outfit for the department of medicine by Mrs. T. B. Hearst.

Bequests aggregating over $130,000 have recently been filed in Philadelphia on behalf of hospitals and charitable institutions.

Dr. G. Frank Lydston has been appointed professor of genito-urinary surgery in the Chicago Clinical School vice Dr. F. Kriessl.

In a note to the Académie de Médecine Dr. Dutremblay describes the successful treatment of seasickness by inhalations of pure oxygen.

THE late M. Crevat-Durant, of Fontainebleau, bequeathed 300,000 francs to the hospitals of Paris, and 100,000 francs to the Institute Pasteur.

CONGRESS has appropriated over $1,000,000 for the purchase of land and the erection of new buildings as a government hospital for the insane.

MRS. SALLY BAKER, of Marshfield, Mass., the last pensioner of 1812 in that part of the country, has died at the age of 101 years and 11 months.

DR. W. H. WELCH, of Johns Hopkins University, has been appointed one of the judges of the Hall of Fame of New York University.

THE *St. Petersburger Medicinische Wochenschrift* states that advices from Tokio, Japan, announce that Kitasato has discovered a second plague bacillus.

YALE UNIVERSITY is soon to establish a new medical school. A lot adjacent to the New Haven Hospital will probably be purchased at a cost of $75,000.

THE newest drink is said to be called the "quo vadis cocktail." The full significance of the name dawns upon one after having taken two or three of them.

THE medical board of the Mount Sinai Hospital has tendered to Dr. Jacobi on the occasion of his seventieth birthday a silver tankard nearly two feet high.

THE Boston Board of Health has recently required all ice dealers to fill out a blank giving details of the source, kind, and method of storing of all ice sold.

THE Paris millionaire philanthropist, Osiris, is building for his friend and physician, Paul Segond, a gynecologic pavilion in the gardens of the Salpêtrière Hospital.

DR. J. M. DA COSTA has been chosen orator for the annual commencement exercises at Yale Medical College. His subject will be "Questions of To day in Medicine."

ON May 14 the Women's Medical College of Baltimore graduated Esther Pak Kim, of Seoul, Korea. She is the first medical graduate in America from her native country. She will become a missionary in her native land.

THE Register of the Johns Hopkins University recently issued shows that there were 231 students enrolled in the medical school, of whom twenty were in special courses.

PROF. WILHELM CONRAD ROENTGEN will be awarded the Barnard medal, in commemoration of his discovery of the *x*-rays, at the commencement of Columbia University on June 13.

RECENTLY in Mt. Vernon, New York, an electrician received a discharge of 10,040 volts of electricity, and although badly burned and made insensible was not otherwise seriously injured.

WU TING FANG, the Chinese minister, recently delivered an address to the graduates of the Woman's Medical College of Pennsylvania, in which he advised them to seek their fortunes in China.

THE London University has at last a home worthy of its claims and its past performances. It has taken possession of a wing of the enormous palace in Kensington known as the Imperial Institute.

A SPECIAL expedition for the study of leprosy is to be made by the Danish specialist, Dr. Ehlers. He will, by invitation, visit Creta, on which there are several hundred lepers, as well as Bosnia and other Eastern regions.

METALS get tired as well as human beings. Telegraph wires are better conductors on Monday than on Saturday on account of their Sunday rest, and a rest of three weeks adds ten per cent to the conductivity of a wire.

THE Countess Boni de Castellane has erected a building called the Galeries de la Charité, close to the Champs Elysees, to be devoted to charitable purposes, such as the holding of meetings, bazaars, and entertainments in aid of the institutions.

PROF. A. S. GRUNBAUM, of Vienna, claims priority in the discovery of the agglutinating effect of serum on typhoid bacilli, known as Widal's reaction, his claim being based on a certificate signed by Professor Nothnagel and Dr. Mannoberg.

WOOD PULP PAPER as a military clothing is used by the Japanese troops. It is marvelously tough, and has an appearance which might well be regarded with satisfaction for summer use. It holds stitching uncommonly well, while its warmth is undoubted.

A WOMAN in New Jersey has obtained a verdict of $8000 against the Pennsylvania Railroad Co. for a dislocated kidney caused by jar in coupling a car upon which she was a passenger. Her husband is to receive $2000 additional for the loss of her companionship.

The managing committee of the Liverpool School of Tropical Diseases will shortly despatch an expedition to the Amazon to investigate the yellow fever. The expedition will proceed by way of Baltimore, where its members will confer with physicians at Johns Hopkins University.

Toronto University is advertising for two professors for the medical department. On account of the death of Dr. J. E. Graham, the professorship of medicine and clinical medicine is vacant, and the resignation of Dr. John Caven renders the professorship of pathology also vacant.

By a recent order of the French Army Medical Service, medical officers are directed to use injections of antitetanic serum in large and repeated doses in all cases of pronounced tetanus. This order is based on the fact that experience has shown that such injections have a favorable effect in many cases.

Teutonic peasants were the providers of blonde hair for rich Roman princesses, who loved the contrast of its flaxen hue with their black eyes. They even had morning wigs, small and tightly curled, of any color, and kept the beautiful, fair, evening ones to wear when receiving their admirers in the evening.

On May 7 occurred the death of John Bourene, who has worked steadily in the drug department of the Bellevue Hospital for more than thirty years. Although he was an ordinary laborer, having no theoretical knowledge of chemistry or pharmacy, he had become very expert in the routine work of extracting drugs and making tinctures.

One of the features of the Exposition of Hygiene at Naples is a reproduction of the heating, lighting, and water-supply arrangements of a Pompeian house. Naples now boasts of the finest water-supply in the world since the waters of the Serino have been piped into the city, and the transformation of most of the famous Naples slums into handsome boulevards during the last ten years is an interesting feature to be seen in connection with the exposition.

The distinguished scientist, Milne Edwards, the most noteworthy zoologist in France and almost in Europe, died a few weeks ago after prolonged illness. He succeeded his father as director of the Natural History Museums and of the Jardin des Plantes, and professor of zoology in the School of Pharmacy. He attained the distinction of being a member of the Académie de Médecine and also that of Science. He was, moreover, an officer of the Legion of Honor.

Science of March 16 states that the case of Professor Neisser, of Breslau, accused of making vaccination experiments on human subjects, has been again brought up in the Prussian Diet. It was reported for the Minister of Education that the question had been taken up by the State Attorney, but the prosecution was barred by the statute of limitation. Disciplinary proceedings were, however, in progress.

According to a recent lay despatch Japan is the happy hunting ground of the trusts. It seems that the doctors of Mihara Machi and Bingo Province have lately established a medical trust which is unique. It has already raised the price of all drugs and medicines fifty per cent. It has also arranged that each of the doctors composing it shall communicate to his *confrères* the names of such patients as are in debt to him. Other medicos must take care not to attend such a patient. If they do, they will subject themselves to a severe fine at the hands of the association.

In Germany, says *The Lancet*, as in almost every continental country, military service is obligatory, and the law provides severe penalties for those who try to escape this duty by fraudulent means. Cases of this kind are infrequent, and a great sensation was caused when it was known that the military authorities had discovered that an agency existed in Rhenish Prussia by which young men were systematically enabled to evade the conscription. The army medical officers in that Province charged with the examination of the young men selected for military service found some time ago that a relatively great number of recruits had to be rejected because they suffered from jaundice and from cardiac palpitations; also a certain number of young soldiers showed those symptoms at the commencement of their service in the army, so that they had to be discharged. The cause of these remarkable phenomena was discovered by an accident. In the belongings of a soldier admitted into the military hospital for alleged cardiac disease a box was found containing pills which were proved by chemical analysis to contain large doses of caffeine. On inquiries being made it was ascertained that the recruit had received the pills from a man named Strucksberg, who was thereupon arrested. The police then discovered that this man had been the head of an agency which had enabled numerous young men to escape service in the army. He had been in association with a medical man, Dr. ——, to whom he used to send his clients. Dr. —— examined them, and when he found the young men fit for military service he prescribed pills of caffeine in strong doses to produce cardiac palpitations, or pills of picric acid to produce symptoms of icterus. Both the medical man and the agent were thereupon prosecuted, together with a number of young men,

before a court at Elberfeld. The agent had died previously to the trial, but Dr. —— was found guilty and condemned to ten months' imprisonment. Dr. —— had been known to be of very low professional standing, and during the trial there was no indication that other medical men had been connected with the case—the "pills case," as it was popularly designated.

THE Detroit Medical and Library Association has passed the following resolutions on the death of Dr. Geo. E. Frothingham:

Whereas, Divine Providence has taken from earth our brother, Dr. George E. Frothingham;

Resolved, That we tender our heartfelt sympathy to his bereaved family;

Resolved, That we place on record our appreciation of Dr. Frothingham's manly qualities, professional attainments, and brilliant services to the medical profession. Among these we treasure as an inspiration his faithfulness to friends, devotion to duty rare scholarship, untiring zeal, clear, incisive thought, long and faithful service at the University of Michigan, his broad attainments as a general physician and surgeon, as ophthalmologist and otologist, and his sound judgment in their practical application.

We recall the fidelity and ability with which he discharged his obligations, as member of many medical societies, and the duties of official positions therein, notably as Secretary of the Section on Practice of Medicine, and Chairman of the Section on Ophthalmology, American Medical Association, and President of the Michigan State Medical Society, Secretary and President of the Washtenaw County Medical Society, and President of the Wayne County Medical Society.

His interest in all questions of medical polity was unflagging. To their solution he brought a wide knowledge and keen mental acumen, firing all with the intensity of his own heart. Having satisfied himself of the correctness of any position, he organized the forces within reach for its speedy realization. A ready writer and forceful speaker, he never watched a professional contest from the fence, but was ever found amid the thickest of the conflict, on the side where his judgment dictated.

When the medical history of Michigan and the United States during the past generation shall be written, the labors of Dr. Frothingham will be found to have done much in shaping the course of events.

Though dead, he will ever live in the lives of the students that he molded into medical investigators and practitioners; in the changes wrought in the thinking and practice of his medical associates; in his papers and discussions, which form a part of medical literature; and in the impulse of his strong, intense personality toward that which is truest and best in professional thought and life.

Resolved, That a copy of these resolutions be sent his family and furnished the daily and medical press, especially the Michigan medical journals and the *Journal of the American Medical Association*.

LEARTUS CONNOR,
CHARLES DOUGLAS,
A. U. COLLINS,
Committee.

NEW PUBLICATIONS.

ANATOMY OF THE BRAIN.

The difficulty medical students usually encounter in acquiring a clear knowledge of the anatomy of the brain will be to some extent overcome by using this little work. It is illustrated with forty-one engravings, and its clear and systematic arrangement will enable the student rapidly to acquire familiarity with the subject described.

The Anatomy of the Brain. A Text-book for Medical Students. By Richard H. Whitehead, M.D., Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. 6¼ x 9½ inches. Pages, v–96. Extra Vellum Cloth, $1.00, net. Philadelphia: The F. A. Davis Co.

SAUNDERS'S QUESTION COMPENDS.

The most recent number of this useful and interesting series is a new edition of the manual on the Essentials of Diagnosis. The manual is an exceedingly useful compilation, and the subject treated of has been set forth with sufficient fulness to serve many of the purposes of the practicing physician.

Saunders's Question Compends, No. 17. Essentials of Diagnosis, Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine. By Solomon Solis-Cohen, M.D., and Augustus A. Eshner, M.D. Illustrated. Second Edition, Revised and Enlarged. Philadelphia: W. B. Saunders, 1900.

A TEXT-BOOK OF DISEASES OF WOMEN.

In these days of much publishing a book that has already reached its third edition needs no comment. The excellence of Penrose's Gynecology has been appreciated, and the demand still continues. While not an exhaustive work, it epitomizes the knowledge of its subject, and gives good treatment. It is possibly open to the objection that, as a rule, only one method of treatment is given under each disease, but one method well learned is better than many in confusion. This is a book essentially for the student, and he will enjoy its conciseness and directness. It is also quite possible that the general practitioner may find much that is useful in its pages. We commend the book to both.

Diseases of Women. By Charles B. Penrose, M.D., Ph.D., Professor of Gynecology in the University of Pennsylvania; Surgeon to the Gynecian Hospital, Philadelphia. Illustrated. Third Edition, Revised. Pp. 518. Philadelphia: W. B. Saunders, 1900.

THE INTERNATIONAL MEDICAL ANNUAL.

The International Medical Annual is an old friend, and always finds a ready welcome with its readers. The present volume contains a series of articles covering as nearly as possible the whole range of medicine and surgery. The contributors have done their work in the best style, and the volume will continue to occupy the high place it has already achieved among the handy works of ready reference.

The International Medical Annual and Practitioner's Index. A Work of Reference for Medical Practitioners. 1900, Eighteenth Year. Price, $3.00. New York and Chicago: E. B. Treat & Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Diagnosis of Esophageal Diverticula.

F. A. P. Jung (*Journal of the American Medical Sciences*) says that in the differential diagnosis of diverticula it will be well to consider the following points:

1. With dilatation as well as with diverticula there occur painful cardiospasms (Kelly, Jung) as well as painless cases (Reitzenstein).

2. In both vomiting occurs from the esophagus, occasionally from the stomach. Even in cases of typical cardiospasm eructation from the stomach may occur.

3. If food eaten one or two days before is vomited, while other food eaten in the meantime remains down, the case seems to be one of diverticulum. No observations to the contrary have been made so far.

4. The swallowing sounds are abnormal in all cases of dilatation. In cases of diverticula the swallowing sounds are audible in thirty-three per cent, and can be used for diagnostic purposes (Kelling's method). Westphalen's sound can also be heard in diverticulum with dilatation of the esophagus (Jung).

5. If after emptying the esophagus it is easy to enter the stomach a diverticulum probably exists (Mintz, Reichmann). Yet the passage of the tube may be difficult. "Only once out of ten experiments does one find the cardia and gain entrance into the stomach" (Reitzenstein).

6. In making Rumpell's test, proof must be furnished that the tube is actually in the stomach. Inflation in this case is impossible, as feeling of the sound is not always practicable.

7. The proof positive of having entered the stomach is obtaining gastric juice through the inner tube (Jung).

8. Mercier's sound or Leube's diverticulum tube is necessary in order to find the entrance into the stomach. These tubes must be perforated for the diverticulum test, and by means of a thin inner tube gastric juice can be brought up.

9. After a diverticulum has been diagnosed its height can be ascertained (*a*) by Kelling's test (swallowing sounds), and (*b*) by filling the diverticulum with a colored solution and putting a narrow strip of white adhesive plaster longitudinally on the tube.

10. Neubauer's experiment for ascertaining the level of the liquid can also be used according to Kelling to determine the entrance into the diverticulum.

11. The entrance of the diverticulum can easily be overlooked by esophagoscopy.

12. Gastrodiaphany did not show the diverticulum in Mintz's case, and gave no information about the kind of enlargement. In Reitzenstein's case it was possible to make the diagnosis diverticulum by gastrodiaphany alone.

13. *X*-rays show an enlargement of the esophagus only.

14. The statements of even the most experienced patient, that the tube is in the stomach, are often erroneous. The bending of the tube gives the patient and physician alike a sensation as if the tube had entered the stomach.

THE SURGICAL ASPECTS OF THE MODERN SMALL BORE PROJECTILE.

Schachuer (*Annals of Surgery*, January, 1900) says that all advanced nations have practically the same character of rifle and projectile, and that the modern small-bore projectile is capable of producing wounds of both a humane and a gruesome nature. The nature of the wound produced by the small-bore projectile is either dependent upon the intervening distance or the character of the structure wounded, or both. The precise manner in which the explosive action is developed in structures filled with or rich in fluid is still *sub judice*. The weight of evidence and the majority of authors favor the hydrodynamic rather than the hydraulic theory. The new projectile is propelled with greater energy, velocity, and accuracy; it is lighter, has a smaller frontage, and is less liable to deformation on striking the object. It has less disabling capacity, and on the whole produces wounds of a more humane character than the old leaden bullets. By explosive action is meant the damage created in structures outside the projectile's path. At 800 or 1000 yards explosive action is occasionally met with, and then only in the skull or in parts of the body filled with and rich in moisture. The rotary action of the projectile may continue after its penetrative movement ceases, and the character of the wound is largely dependent upon this rotation.

INHERITED SYPHILIS.

Finger (*Wiener Klin. Woch.*, 1899, Nos. 4 and 5) has undertaken to collect, sift, and review all the literature bearing upon hereditary syphilis, and concludes as against Kassowitz, who believes in unavoidable heredity, that inherited syphilis is a myth, and that transmission of the disease to the fetus depends upon mechanical admixture of syphilitic virus to the ovular or spermatic elements furnished by the infected parent. Finger further concludes from his research:

1. Undoubted inheritance of strictly paternal, and

2. Of strictly maternal syphilis.

3. Maternal syphilis is transmissible to the fetus through the ovum and also during pregnancy *per placentum*.

4. Syphilis acquired by the mother, even in the last month of pregnancy, may infect *in utero* the child of otherwise healthy parents.

5. The presence *in utero* of a fetus infected with paternal syphilis affects the maternal organism in various ways. Either the mother becomes infected (*choc en retour*) or not, while she becomes immune to subsequent syphilitic infection, or, again, she remains perfectly healthy.

6. Finger recognizes an early form of conceptional syphilis characterized by the immediate occurrence during pregnancy of secondary manifestations—in the absence of a primary lesion—and also a tardy form of conceptional syphilis characterized by the immediate occurrence of tertiary lesions, in the absence of primary or secondary manifestations.

7. By far the largest number of women who escape infection while bearing the offspring of syphilitic fathers acquire during, and by means of, their pregnancy an immunity against subsequent syphilitic infection (Colles's law).

8. In the same way do children of syphilitic parents, who escape infection *in utero*, develop immunity toward acquired infection (Profeta's law).

Intraperitoneal Infusion of Saline Solution.

For the gradual introduction of saline solution into the peritoneal cavity after severe operations, Eichel (*Archiv für Klin. Chir.*, Band lviii, Heft 1) has adopted the following method: Before closing the wound a No. 18 catheter is inserted at the lower angle and carried down into Douglas's pouch. The wound is sutured in the usual manner, and the catheter is cut off and its end secured with a wire suture and attached to a glass irrigator. After the dressings have been applied a continuous flow of saline solution is begun and maintained for twenty-four hours at the rate of one cubic centimeter a minute. This is effected by compressing the supply tube with a clamp fitted with a millimeter screw. About three pints of fluid is introduced in twenty-four hours.

A case of rupture of the liver, with profuse hemorrhage, is cited, in which three quarts of saline solution was injected into the peritoneal cavity in two days, the patient making a good recovery without any other stimulation. It was estimated that fully two quarts of blood was lost.

MEDICINE.

Scarlatina Miliaria.

J. P. C. Griffith (*Philadelphia Medical Journal*, May 12, 1900) says that however frequently miliaria may attend severe cases of scarlatina, the oft-expressed view seems untenable, that its presence is an indication that the case is severe.

The same statement applies to the intensity of the scarlatinal eruption and its relation to miliaria. There appears to be no connection between the two. There seem to be different causes acting to produce the efflorescence and the vesiculation, although these causes are undoubtedly frequently associated.

Contrary to the opinion of certain writers, there appears to be no necessary relation between the amount of scarlatinal peeling and the degree of miliarial eruption.

The view of Thomas is very probably correct (and, in so far as they differ, those of the other writers quoted are incorrect), viz., that the development of miliaria in scarlatina depends largely on some peculiarity in the skin of the patients, rather than on any special intensity of the scarlatinal rash or other factor. The observation of Henoch upon a family tendency to miliary scarlet fever seems to support this view.

It is perfectly possible in occasional cases to have the presence of abundant miliarial eruption cause decided difficulty in diagnosis, and even lead to error.

The Treatment of Summer Diarrhea.

The curative treatment of diarrhea, says F. J. Waldo (*Lancet*, May 26, 1900), leaves much to be desired. At the same time, however, it may be broadly stated that hardly any disease has reaped more benefit from the advances of modern therapeutics. The use of opiates has greatly lessened. Alcohol is the best stimulant, and astringents are at times useful, especially in the forms of the subgallate of bismuth and the newer combinations of tannic acid, such as tannigen, especially in the later stages. Intestinal antiseptics have proved on the whole somewhat disappointing, while of purgatives castor oil and calomel are the best. An excellent plan is to keep the child for twelve hours or more upon plain sterile water. Predigested milk is of service, as is the use of pepsin and pancreatin. Intestinal irrigation is most valuable, especially in cases of colitis or of enterocolitis. Sterilized water or normal saline solution is the best for injection, and may be

given cold to reduce fever, or hot to remedy prostration or collapse. In chronic conditions various medicaments may be added. Lastly, there appears to be some possibility of future help from serum treatment.

Inflammation of the Costal Cartilages as a Sequela of Typhoid Fever.

Lampe (*Deut. Zeit. für Chir.*, Band liii, Heft 5 and 6), from his studies of the clinical features and pathology of this condition, concludes:

1. The inflammation of the cartilage originates in the cartilage itself. The perichrondritis is secondary, although its clinical symptoms are the first to appear.

2. There are certain alterations in the cartilage which must proceed before infection can take place. They are due to age, and consist in vascularizations and the formation of sinuses or narrow cavities.

3. The treatment depends on the degree of inflammation; without suppuration an expectant treatment may be employed, but so soon as suppuration manifests itself the only treatment is operative. The excision of the entire costal cartilage is the only guarantee of cure.

Cirrhosis of the Liver.

The distinctive features of the favorable cases of cirrhosis of the liver are, according to W. B. Cheadle (*Lancet*, April 7, 1900): (1) The liver is large and the cirrhosis is probably more acute; (2) the subjects are on the average younger than in the less favorable cases of contracted liver; (3) they are in a condition of fairly good nutrition; and lastly, they are, as a rule, either exceptionally hard drinkers, acute drinkers, or they are syphilitic. It may be asked in regard to the cases of apparent recovery in syphilitic and alcoholic cirrhosis, as shown by subsidence of ascites and recovery of general health, how far this remains permanent. There is nothing more difficult, says the writer, than to trace out cases to their conclusion.

Transmission of Infection by Flies.

An interesting experiment illustrative of the possibility of transmission of infection through the agency of flies is communicated by Dr. F. Smith, of Sierra Leone (*Public Health*, December, 1899). Four Petri dishes were prepared, three with sterile, coagulated serum, and one with a culture of diphtheria on serum. A common house-fly was made to walk first over a sterile dish (No. 1), then over the one on

which was the growth of diphtheria (No. 2), and next over the other two sterile ones (Nos. 3 and 4). Numbers 1, 3, and 4 were then placed in an incubator. On the following day No. 1 showed only a few cocci, but Nos. 3 and 4 showed colonies of diphtheria bacilli in the tracks of the fly.

The Elimination of Mercury by the Mammary Gland.

E. Somma (*La Pediatria*, 1899, No. 6), from an analysis of the milk of seven women who were being treated with subcutaneous injections or with inunctions of mercury, failed to find the slightest trace of the drug in the milk. Somma therefore concludes that the treatment of heredo syphilitics by the milk of women submitted to mercurial inunctions or injections of mercury has no rational foundation in fact.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M D.,
Microscopist to Harper Hospital, Detroit.

Researches on Carcinoma and Syphilis.

According to the Berlin correspondent of *The Lancet*, a highly interesting communication has been made to the *Centralblatt für Bacteriologie* by Professor Schuller, who has discovered in malignant growths—sarcoma as well as carcinoma—corpuscles of a very characteristic type in different stages of development. According to his description these corpuscles were of a round or oval form, their size being three times that of the red corpuscles of the blood, and their color golden-yellow or brownish; they refracted light strongly. They consisted of a solid, resistant, refracting, light-colored capsule, containing protoplasm of a darker hue. Under certain circumstances the capsule showed not only different strata but also stripes. On the surface of the capsule there were pores. The protoplasm was of a granular texture in some cases. In cultures there were also organisms, the capsules of which had burst, and the escape of the protoplasm had left the capsules empty and folded. In living cultures ciliated protuberances were to be seen penetrating through the pores. Unstained specimens hardened in alcohol and cleared in oil of lavender were used for microscopical examination. The organisms were distinguished by their characteristic color and brightness. They had been found by Professor Schuller in every specimen of carcinoma and sarcoma, both fresh and hardened, which had been taken from malignant growths of the tongue, the lips, the rectum, etc., and from melanosarcoma. He had also

made cultures of the organism, for which purpose only recent growths, not yet degenerated, were used. He cut pieces from the center of the growth and kept them in glass vessels at the temperature of the human body, the tissue of the growth itself being used as the culture medium. When the culture was successful after a few days gray droplets were seen, which on microscopical examination were found to consist of small bodies of the above described species; in some instances the capsule contained protoplasmic substances, in others they were folded capsules without protoplasm. He had endeavored to infect animals with these organisms, but the experiments were not yet finished. The organisms obviously belonged to the protozoa. He somewhat cautiously suggested that there might be a connection between these organisms and the pathology of carcinoma.

Another communication by Professor Schuller to the same journal is devoted to organisms discovered by him in every stage of syphilis, from the primary chancre to the tertiary form, and in hereditary syphilis also. In primary chancre he had found very small organisms with a double-lined capsule and brown protoplasm, their shape being generally oval. They were best seen under a magnifying power of 1000 diameters. In chancre, when the specimen had been stained in a solution of iodine and iodide of potassium, fine canals were seen going from the surface to the interior filled up by corpuscles of the form of conical bullets, in which the above described microorganisms were situated. They were present in fresh tissues only in every instance, and were especially numerous in hereditary syphilis. Cultures were less successful than in the case of malignant growths, especially those from chancres, whilst cultures from the lymphatic glands gave a better result. The development of the cultures was very similar to that of malignant growths. Professor Schuller believes that his discovery is of great importance in connection with the etiology of syphilis. His observations, if verified by other pathologists, would certainly cause a great sensation. It must, however, be remembered that in carcinoma and syphilis microorganisms alleged to be the cause of the disease have already been described by several authors, but hitherto all these discoveries have ended in disappointment, and the medical profession would therefore do well not to be too sanguine when announcements are made relative to the etiology of cancer or syphilis.

Researches on Antitoxins.

Wasserman, in a paper read before the German Congress of Internal Medicine (*Lancet*, May 26, 1900), said that except in the case of diphtheria the results of the antitoxin treatment have not been very

favorable. Anticholera, antityphoid, antipneumococcic, and antistreptococcic sera have been tried without success. Experiments made by Professor Ehrlich have shown that the action of bactericide sera depends upon two substances — the immunizing or "intermediate" substance and the so-called "complement." Both substances together had a specific action against the virus. Hitherto the intermediate substance which is present in the serum of immunized animals has been used exclusively in the serum treatment of enteric fever, and the "complement," of which a certain quantity is present in the normal blood-serum, has been neglected. A cooperation of both the intermediate and the complement substances being essential for an antitoxic action, Professor Wasserman, accordingly, apart from the serum of immunized animals, injected a certain quantity of fresh normal blood-serum. It is of great importance to find the adequate complement to a given immunizing serum. He made experiments on guinea-pigs infected by a culture of enteric fever bacilli. Three of the guinea-pigs received injections of serum taken from an immunized dog, the result being that the three animals died. In another series of guinea-pigs, together with the above serum, a quantity of serum taken from normal, not immunized, cattle was injected, and by this method the infection was effectually overcome. Professor Wasserman concluded that by the administration of fresh serum of cattle the action of the immunizing substance was practically very much augmented. He hoped now to be able to obtain good results in the human subject.

Bacteria in the Arctic Regions.

Some interesting facts concerning the freedom of the air, water, and even the intestinal contents of animals of arctic regions from bacteria are communicated by Dr. Levin, of Stockholm (*Annals de l'Institut Pasteur*, July, 1899; *American Journal of the Medical Sciences*, April, 1900), who took part in the Natthorst expedition during the summer of 1898. Working each time with 20,000 liters of air, he found practically no bacteria. Sea water, snow, and ice yielded on an average one bacterium per eleven cubic centimeters. In twelve samples of brown mud he found only a single bacterium. The intestinal contents of polar bears, seals, eider ducks and other birds, sharks, sea-urchins, anemones, and crabs were nearly always sterile. Not only did he obtain no growths, but he was unable to find evidence of the presence of bacteria after staining the intestinal contents with the usual agents. These results confirm the conclusions of Nencki, Nuttall, and Thierfelder concerning the presence of bacteria as a non-essential factor in digestion.

A Study of the Blood in Cancer of the Stomach.

Wm. Osler and Thos. McCrae (*New York Medical Journal*, May 19, 1900) from their researches on the blood in cases of cancer of the stomach have reached the following conclusions:

1. In a doubtful case a blood-count below 1,000,000 red blood-corpuscles is strongly in favor of pernicious anemia.

2. While nucleated red blood-corpuscles are present in all very severe anemias, megaloblasts rarely if ever occur in cancer of the stomach.

3. Neither an increase in the leucocytes nor special variations in the forms appears to be of any moment in the diagnosis of cancer of the stomach.

The presence or absence of digestion leucocytosis is too uncertain to be of much assistance in diagnosis.

THERAPEUTICS.

Arsenic for the Radical Cure of Epithelial Cancer.

C. Trunecek, of Prague (*Medical Record*, June 2, 1900), reports a number of cases of epithelial cancer which he has cured by the application of a combination of arsenious acid and absolute alcohol. The remedy is applied as follows: The ulcer is cleansed and dried (we must not be afraid of causing a slight flow of blood; indeed, it may even be necessary to scrape and denude a portion of the neoplastic tissue); the arsenical mixture is then stirred and spread with a brush over the whole surface of the tumor, but without covering it, and it is left to dry. If at the end of five minutes the patient feels no pain, another layer of the mixture may be spread over the cancer. No dressing is placed upon it.

The writer concludes that the mechanism of the cure of cancer by the application of the hydroalcoholic mixture of arsenious acid may be explained as follows:

1. The cancer cells are first of all dehydrated by the alcohol, and then their protoplasm coagulates in the presence of arsenic.

2. The cells of cancerous connective tissue—cancerous stroma—degenerate, and provoke a serous exudation, which in its turn determines alterations in the cells mummified by the arsenic.

3. In the surrounding healthy tissues a circumscribed inflammation is set up by the remedy, which always goes on to suppuration, and by means of which the neoplasm is first cut off from the circulation, and is finally eliminated from the organism as a foreign body.

The Treatment of Baldness.

G. T. Jackson (*Medical Record*, May 26, 1900) says that his treatment for the ordinary case of loss of hair with dandruff is as follows: First, attention is given to the general condition of the patient. The patient is then given an ointment consisting of precipitated sulphur, ten-per-cent, and cold cream with or without either salicylic acid three to five per cent or extract of jaborandi, a drachm to the ounce, and is directed to use it once a day for three days, and then to wash the hair and scalp. Immediately after the hair is dried, the ointment is again applied, and repeated every other day for ten days. The scalp is again washed, and the ointment continued twice or three times a week until the dandruff is controlled, the washing being repeated from time to time. When the scalp is in good condition, massage is ordered. If the patient will not use an ointment a lotion of resorcin, at first three and afterwards five- and ten-per-cent strength, should be employed morning and night. In a case of loss of hair without any apparent trouble of the scalp, the writer relies mostly upon massage, using sulphur preparations occasionally to keep the scalp a little oily.

Dionin as a Substitute for Morphine.

F. Plessner (*Therap. Monatsh.*, 1900, No. 2) shares the enthusiasm of those who find in dionin a means of robbing the "cure of morphinism by suppression" of its attending horrors. While he does not believe the treatment can be made entirely painless, he still holds that we may find in the various methods of physical and medicinal treatment, especially hydrotherapeutics, a means of relieving, diminishing, and soothing the anguish of morphinomaniacs. Dionin, among others, noticeably reduces the patient's sufferings, and may be exhibited during prolonged periods without untoward symptoms.

The greater usefulness of dionin, however, lies along the line of prevention of morphinism. It is amply sufficient to control the cough of phthisis, bronchitis, and other respiratory diseases. An adequate dose of dionin compares favorably with morphine for the treatment of asthma, sciatica, locomotor ataxia, dysmenorrhea, etc. If dionin be therefore substituted for the other drug, we may hope thereby to restrict the number of those patients who become unwilling victims of the morphine habit.

Toxicity of Heroin.

E. Harnack (*Münch. Med. Woch.*, 1899, No. 27) warns against the indiscriminate use of heroin. A series of experiments conducted upon dogs have demonstrated that compared with morphine, heroin (its

acetyl derivative) has a much greater inhibitory influence upon the respiratory center and upon the heart, and may give rise to muscular spasm, violent convulsions, and fibrillary trepidation of the muscles. While Harnack does not believe himself justified in concluding from these experiments upon animals the possible effects upon man, he still holds that in the human organism heroin proves much more toxic and dangerous than morphine.

Moreover, the manufacturers have since determined five milligrammes, which equals one-twelfth grain, to represent the maximum safe dose for an adult, which in itself ought to be sufficient to insure utmost caution in exhibiting the drug, so much the more as it is frequently left with patients for the purpose of mitigating existing respiratory difficulties.

Papillomata of Penis.

In the case of vegetations multiple and sessile on the glans penis and foreskin, Dr. Silbromintz (*Rev. de San. Militar; Medical Press*) recommends the growth to be surrounded with a layer of muslin or cotton-wool, then to be carefully washed with Hoffman's liquor, and afterwards painted with the following:

Collodion, flexible	80 parts.
Resorcin	22 parts.

Mix.

After a few applications the warts fall off, leaving a small excoriation, which rapidly heals under a few applications of the following powder:

Carbonate of zinc	9 parts.
Subnitrate of bismuth	9 parts.
Resorcin	2 parts.
Talc in fine powder	80 parts.

Mix.

Treatment of Warts with Formalin.

M. F. Engman (*Medical Review*, May 26, 1900) says that it is first necessary to remove the thickened horny layer with a salicylic acid plaster, twenty-per-cent, or salicylic acid in flexible collodion, one drachm to the ounce, applied for several days, when the patient returns. The part is bathed in very hot water, which macerates and removes the homogenized horny layer. It is then dried, wiped with benzine to remove any fat or plaster, and painted with pure formalin. The painting should be done thoroughly, and the swab allowed to remain on the place for a few moments, which increases the penetration of the gas in solution. This agent is deeply penetrating, and seems to seek out and

destroy the offending factor. Very slight burning is experienced, but is much less painful than the usual methods. One or two paintings is sufficient to effect a cure; the wart whitens and drops off in a few days, but the horny layer must first be well softened and removed by the salicylic acid.

Ichthyol in the Gonorrhea of Women.

John G. Clark (*Journal of the American Medical Sciences*) maintains that it is quite evident that absolute rest in the acute stages of the infection is one of the most important essentials. The writer brings out the point that the silver salts, notwithstanding the fact that they have been very largely condemned by a number of writers, still maintain a very important place in the treatment. Of the more recent remedies which have been suggested, ichthyol is unquestionably the most valuable because it is non-irritating, is very effective in alleviating pain and reducing the inflammation, and absolutely free from any disagreeable sequelæ such as are occasionally noted after the use of the more irritant remedies. A point also upon which special stress should be laid is that the principle of immediate germicidal treatment in acute cases, as insisted upon by Neisser, appears more judicious than the conservative plan employed by Behrens and others.

The Treatment of Whooping-cough.

At a recent meeting of the New York Academy of Medicine, C. G. Kerley (*Pediatrics*, May 1, 1900) in a paper on whooping-cough said that every case of whooping-cough may be relieved, either by modifying the severity or diminishing the number of the paroxysms; the duration of disease is probably not shortened by treatment; remedies sedative in character, with fresh air, give the best results; if the remedy is to be of service, its beneficial results may be noticed within twenty-four to forty-eight hours. The best results are obtained when antipyrin and the bromides are commenced at the height of the paroxysmal stage and then pushed vigorously; being sedative in character, the good effects may be lost in a prolonged case; and children may have whooping-cough and never whoop.

A Case of Acute Gonorrhea Treated by Mercurol Irrigations.

F. C. Valentine (*Philadelphia Medical Journal*, May 19, 1900) reports a case of acute gonorrhea which was treated with irrigations of mercurol. When first seen the irrigation given was one of five per

cent, and only the anterior portion of the urethra was irrigated. The following irrigations were weaker, and the third day microscopical examination revealed an entire absence of the gonococci. After the fifth irrigation the discharge was reduced to a slight pin-head drop. The urine became clear after the first irrigation. The burning sensation after each irrigation almost entirely disappeared after the third day.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Warts: Should We Treat Them?

H. Fournier (*Progrès Médical*, April 7, 1900, p. 209) considers the etiology and treatment of warts, which he divides into the common warts and the plane warts of young people. These often occur simultaneously and probably result from the same source—inoculation of some sort upon a predisposed individual. The differentiation is more apparent than real, and classical descriptions by dermatologists only tend to increase the confusion.

However this may be, the question of predisposition has been confirmed by several authorities. Barthelemy (3d Congress French Med., Nancy) has seen cases in which common warts occurring on the soles, palms, between the fingers, and on the face, coexisted with vegetations.

As to treatment, cases are on record which have been cured by suggestion (Djamdjieff, Bernheim of Nancy, Pitres of Bordeaux).

Warts may disappear on suppression of one or several of them, a fact which Diday had already determined with reference to condylomata (Brocq). Excision or even incision of one wart brings about a disappearance of its neighbor. Accidental contusion of neighboring parts has been known to cure warts. Superficial applications of silver nitrate sometimes will do the same. Barthelemy, Besnier, and Brocq hold that warts may disappear of their own accord, and without any treatment whatever. Djamdjieff holds the same view with reference to plane warts.

The main inducement, however, to treatment resides in the manifest contagiousness of warts, which had been previously denied by Kaposi. Warts are not only contagious as between different individuals, but also especially autoinoculable (Majoccki, Babes, and Kuhnemann have isolated a form of microorganism special to warts).

Fournier recommends to proceed in a systematic manner. He

fears a possible relationship between warts and cancer, and deprecates the loss of time entailed by suggestive therapeutics. He advises to begin treatment with the larger warts and continue with the smaller ones if required. He notices the various means at our disposal: chemical cauterization, medicated collodions, etc., but gives preference to abrasion, excision, raclage, and the galvanocautery, and further recommends an additional course of constitutional treatment for neurotic patients, the chief element of which he finds in hydrotherapeutics.

Multiple Epithelioma Developing upon Lupus Erythematosus.

The following case is reported by Pringle (*British Journal of Dermatology*, January, 1900): A woman, aged thirty-six years, came under observation in March, 1890, presenting an active erythematous lupus of the nose, temples, cheeks, chin, and scalp, this last region being affected to an unusual extent, the greater portion of the scalp being transformed into scar tissue. Seven years later she again came under observation, presenting at this time two nodular growths upon the scalp typically epitheliomatous in appearance. These growths were excised. During the following two years fresh epitheliomatous manifestations appeared. Microscopical examinations of these growths showed them to be squamous epithelioma.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Production of Local Anesthesia in Ear.

Albert A. Gray (*British Medical Journal*, April 21, 1900) strongly recommends anilin oil with rectified spirit as a solvent for cocaine. He claims for this mixture in five- to ten-per-cent solution special advantages in producing a beneficial effect on suppuration, causing it to diminish or cease. This is probably due to the power of the oil in extracting the water from the tissue. This method of producing local anesthesia may also be employed on other mucous surfaces.

Oily Collyria.

Serini and other pupils of Professor Panas secure better effects from oily collyria than from watery solutions. They produce neither lacrimation nor spasm of the orbicular muscle, are easily kept in aseptic condition, and display remarkable efficacy and rapidity of action. One

drop of a two-per-cent solution in oil is enough to secure local anesthesia; eserine collyria in oil are even more efficient than the aqueous solutions. The only drawback to their employment seems to be the irritant effect of oleic acid, which, however, can be avoided by eliminating it from the oil. As a sample we quote the following formula: Fresh olive oil, washed with alcohol and sterilized, 10 cubic centimeters; cocaine, 20 centigrammes. — *La Farmacia Moderna*, in *Boletin de Higiene*, Toluca (Mexico), vol. vi, No. 5, p. 151.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Treatment of Rupture of the Parturient Womb.

A. V. Wendel (*Medical Record*, May 26, 1900) says that in threatened uterine rupture the woman is to be delivered at once by the method which does not increase the excessive intra-uterine tension. After rupture occurs, delivery by the natural passages is permissible only if the uterine injury is not aggravated thereby. If the true conjugate diameter of the pelvic inlet measures less than eight centimeters, a completely intraperitoneal fetus should be delivered by abdominal section; but if the conjugate measures eight centimeters or more, the uterus should be removed by vaginal hysterectomy and the child delivered by the feet through the natural passages. If life is detected in the child after the mother's death, a post-mortem section should be performed. The uterine tamponade is useful only as a dressing to prevent intestinal prolapse or to retain reposited loops of intestine within the abdomen until the case can be submitted to operation. Conservative surgery exposes the woman to the serious risk of subsequent rupture, and should therefore not be elected unless expressly commanded by the patient or immediate relatives. Vaginal suture is open to the objection that bleeding arteries in the parametrium are apt to be overlooked. When laparotomy becomes necessary for the birth of the fetus the uterus is to be removed by supravaginal amputation with the extraperitoneal or intraperitoneal treatment of the stump, according to the exigencies of the case or ability of the practitioner. Vaginal hysterectomy is the elective procedure in all cases, but should be supplemented by abdominal section whenever necessary.

THE MEDICAL AGE

VOL. XVIII. DETROIT, JUNE 25, 1900. No. 12.

ORIGINAL CONTRIBUTIONS.

THE DUAL ACTION OF THE BRAIN, AND ITS RELATIONS TO DEXTERITY AND DOUBLE CONSCIOUSNESS.*

BY DAVID INGLIS, M.D., DETROIT, MICH.,

Professor of Nervous and Mental Diseases, Detroit Medical College.

The brain is, anatomically, a double organ, yet mental processes are single. *A priori* we should expect in a double brain, a double mind. Text-books on physiology and nervous diseases have little to say of the relation of the two halves of the brain in mental processes, yet the question is of great importance not only in physiology but in the pathology of mental disease. A sufficient number of cases have been recorded to make it certain that a man in whom one-half of the cerebrum has been destroyed can retain his personal characteristics and mental activity. Again, a number of authentic cases are on record in which there was no corpus callosum, and in these individuals there was no defect in mental activity. These facts demonstrate that one-half of the brain can carry on the mental processes of a normal man.

The question which the author of the paper raises is this: Is it not possible that we always do in health what these cases demonstrate that a person may do in disease? The author contends that in health we do all of our thinking with one-half of the brain, the other half playing an entirely subordinate rôle. Physiological arguments in favor of this view are found in the following facts: While coarse movements can be performed nearly as well by one-half of the body as by the other, whenever it becomes necessary to carry out movements involving speed, dexterity, and accurate adjustment, nature organizes one-half of the brain much more fully than the other.

*Abstract of a paper read before the American Medical Association.

Right-handedness is not an accident, but part of a well-defined purpose to secure the greatest facility in the carrying out of skilled movements. We are not only right-handed, but right-legged, right-eyed, and right-eared. It is true that a right-handed man can perform with his left hand, in a clumsy manner and slowly, almost any act usually done with his right, but when we come to the more highly specialized movements concerned in speech, nature practically aban dons one-half of the brain and concentrates the entire speech function upon the other, and the speech function is localized upon the half of the brain connected with the skilled hand. Not only are the special processes centralized in one-half of the cerebrum, but the various centers for heard speech, written speech, emissive speech, are all located in those parts of the different lobes concerned, nearest to a common center, around the island of Reil. Nature has evidently planned it so that the infinitely varied and excessively rapid impulses concerned in speech shall be made easy by shortening, as far as possible, the course which these impulses must take through communicating fibers; in other words, a right-handed man is right-sided, but in nothing is he so right-sided as in speech. When we consider mental processes it is clear that most of our thinking is carried on in terms of speech, and all of our abstract thinking must be carried on in words.

If, for the purpose of facilitating the most skilled and rapid movements and the most rapid combination of sensory memories, nature has used one-half of the brain alone, then it is a logical step to believe that, to carry out the still more rapid processes involved in thought and volition, the same principle should prevail, and that the seat of consciousness and volition is to be found in the closest relation possible with the speech centers, which play so vital a part in all mental processes. If it be objected that it is difficult to believe that one-half of the brain should lie inert while the other carries on alone the intellectual processes, the sufficient answer is that the convolutions which correspond to the various speech centers do now lie inert and seem to perform no particular function. This is just as surprising as it is to conceive of the cortex of the anterior lobes lying similarly unused There are also pathological facts which strongly support the idea here propounded. There can be no question that in Jacksonian epilepsy we are dealing with a discharging lesion involving larger or smaller areas of the cortex upon one-half of the brain only, and it is characteristic that consciousness is preserved unless the convulsion spreads and becomes bilateral, and the moment it does so the patient becomes unconscious. The meaning of this is clear, that while the convulsion is going on in one-half of the cerebrum the patient retains consciousness with the other.

The phenomena of double consciousness strongly support the idea of the dual action of the brain, and can best be explained on the hypothesis which is the subject of this paper. The normal man carries on his conscious life and mental activity with one-half of his brain. Ordinarily the opposite half has no part in the conscious life. In certain neurotic conditions the hitherto unused half rises to supremacy, and the usual governing half takes the subordinate place. That this is the correct solution of the phenomena of double consciousness finds strong support in the phenomena of hysteria and hypnotism. The patient can be rendered, by either of these neurotic conditions, the subject of a hemianesthesia, and it is notable that the hemianesthesia can be transferred from side to side; and, similarly, subjects of double consciousness, under hypnotic influence, may be made to change personalities. From a study of the phenomena of hypnotism it becomes clear that there is that in us which is termed a "subconscious personality" which is capable of carrying out very many of the mental processes of the conscious personality, unconsciously. Physiologically interpreted this means that the secondary half of the brain, while playing a subordinate part, is nevertheless capable of carrying out the combinations of sensations, sensory memories, and certain motions in a logical manner. The paper details a case of the writer's in which a patient, a subject of melancholia, was incessantly tormented by the duplication of all impressions; it seemed to her that every act she performed was done by her at the time it was performed, and also precisely two years before. No act was so trivial but what it seemed to her that she had done precisely the same thing, under precisely the same circumstances, two years before. The preeminent characteristic of melancholia is an increased self-consciousness. The explanation of the case here alluded to is best made by believing that the two halves of the brain participated in consciousness, one slightly behind the other; she thus got a double impression of every experience. Inasmuch as the phenomena of the duplication of sensations, double consciousness, due either to hysteria or hypnotic suggestion or graver mental disease, are always evidences of mental impairment, it would seem that to maintain the most perfect mental action one-half of the brain should persistently exercise the controlling power. Anything which tends to make the ordinary quiescent half assume control, tends to impairment of mental processes and the damage of the individual. If this be true, the attitude of those who advocate a cultivation of ambidexterity is thoroughly illogical. Instead of trying to make a right-handed person less right-handed, we ought rather to try to make him more right-handed. Conversely, the attempt to make a left-handed boy right-handed is a physiological crime. Every effort

ought to be made to make the left-handed boy more left-handed. It is a notable fact that Lombroso states that a much larger proportion of degenerates are ambidextrous than of normal individuals.

Very suggestive of the value of a thorough unilateral training of the brain is the fact that, through the centuries, our educational institutions have persistently concentrated their efforts on training not only the young but advanced students in the study of language. All the years that a boy is studying language he is systematically training one-half of his brain, to the neglect of the other, and it is by no means unlikely that such thorough training contributes to render the dominant half so securely dominant that there is little danger of the other half interfering.

Pathologically the paper opens up certain applications of this theory in the explanation of abnormal mental states, and the paranoiac may be conceived of as an individual in whom the secondary half of the brain carries on an activity sufficiently persistent and independent of the dominant half to explain the double life of a paranoiac, and the gradual growth and systematization of delusions based on hallucinations which find their origin in the uncontrolled action of the secondary half. Again, it is not difficult to understand the mental confusion which would necessarily arise if the two halves of the brain, acting independently, were engaged in active mental processes — in short, if the theory of the paper is correct, it opens a wide field for the study of the mental processes of the insane, and it suggests the possibility of some interesting experiments, and possibly of some therapeutic successes to be won by subjecting the insane to such hypnotic suggestion as would bring out the phenomena of bodily and mental hemianesthesia.

TUBERCULOSIS OF THE MIDDLE EAR.

BY SEYMOUR OPPENHEIMER, M.D., NEW YORK.

A few years ago Voltolini[1] first called attention to the tuberculous nature of certain morbid processes existing in the middle ear of otherwise healthy individuals. Previous to the discovery of the significance of the tubercle bacilli as a pathogenic factor in tubercular processes, these middle-ear affections presented no unusual features and were treated as non-tuberculous affections. The universality of the tubercle bacillus, its presence in all locations inhabited by man, and its liability to produce morbid changes in all the tissues of the body, render a study of tuberculosis always of paramount interest. Not only do the tissues of the viscera suffer from the ravages of this affection, but the special organs, particularly the eye, are constantly

involved by the tubercular changes common to the disease. The auditory apparatus is much less frequently the seat of the affection, but when the middle ear becomes infected with the tubercle bacilli, not only do local changes destroying the auditory apparatus take place, but destruction of the adjoining tissues occurs and life itself is threatened because of the highly important parts reached by the morbid process.

Tuberculosis of the middle ear may be primary or secondary, the primary form being very rarely observed, and then, from the extreme difficulty of eliminating the presence of tubercular deposits in other portions of the economy, it becomes a matter of hesitancy to decide as to the accuracy of the diagnosis. The obvious difficulties incident to the localization of a primary deposit of tubercle bacilli preclude a study of its etiology here, as it seems impossible to find a true case reported with sufficient evidence to warrant the title. The secondary involvement of the ear, the tympanic cavity being practically the first portion of the aural chambers to be affected, has hitherto been considered as occurring quite rarely, but recent investigation has given enough evidence to warrant the statement that tuberculosis of the middle ear is much more frequently a complication of the affection in other portions of the body than is generally supposed.

In the lower animals, especially in guinea-pigs, tuberculosis of the middle ear, both primary and secondary, is more or less frequent. In the experimental production of tuberculosis in these animals, the middle ear is the part involved in numerous instances. One reason for the seeming neglect of the study of the tympanic cavity in the tubercular process is the comparatively small area involved, as compared with the serious visceral or general effects of the disease; and usually by the time the ear is attacked the pulmonary or visceral involvement is of such paramount gravity that the aural phenomena become insignificant.

The tubercle bacilli may be conveyed to the ear in three ways: first, through the Eustachian tube; secondly, by the blood-vessels and lymphatic system; and, finally, from the external auditory canal through a previously or newly formed perforation in the membrana tympani. The two latter methods of infection are relatively infrequent, and will not here be considered, as they present no features differing essentially from infection through the tube. In practically all cases of tubercular infection of the tympanic cavity the contagium is conveyed to the part designated *via* the Eustachian tube, therefore a study of this route will enable one to sufficiently appreciate the changes in this locality.

Before the ear becomes involved the vault of the pharynx unde -

goes tubercular change, commencing with an inflammatory condition, with soft swelling of the adenoid tissue and mucous membrane, and subsequent cheesy degeneration of the lymphatic glands in the immediate neighborhood; from here the infection is conveyed to the tympanic cavity by the ciliated epithelium of the Eustachian tube, infecting this canal at various points along its course.

As the pars tympanica becomes involved, proliferation begins, rapidly followed by the appearance of small, gray, tuberculous nodules in the inflamed and swollen parts, constituting the so-called tuberculous osteomyelitis of the pars tympanica.[2] During the progress of the mucus containing the tubercle bacilli along the Eustachian tube, various prominent points become infected and typical tubercular changes take place. The most characteristic signs of the disease are found at the ostium tympanicum and at the isthmus; this preference, as it were, for these portions of the tube can be explained by the movements of the ciliated epithelium carrying the infective material outwards from the pharynx to the middle ear, the isthmus, from its projecting into the lumen of the tube, acting as a resting-place for portions of the mucus, while the entrance of the tube into the tympanic cavity affords still more of an irregular surface, and therefore is more liable to suffer from the infecting material remaining in the inequalities of the mucous membrane.

Shortly after the pars tympanica becomes the seat of the tubercular process, small miliary nodules occur in the inflamed lining mucous membrane of the tympanic cavity. The tubercular formations arising from the miliary tubercles increase in size and gradually encroach upon the limited space of the middle ear, finally filling up this cavity, destroying the mucous membrane and dislocating the ossicles, which in a short time become necrosed. The entire pars tympanica is converted into new growths, and the disease begins to involve the adjacent bony walls and the antrum. Extensive destruction taking place, the mastoid and internal ear are destroyed, or else the patient succumbs to the general tuberculosis present. At an early period the disease invades the Eustachian canal, destroying its bony wall and depositing tubercular nodules in the interstitial connective tissue of the facial nerve, separating the nerve into its component fasciculi and destroying it. The inner ear being destroyed, the disease progresses until brain involvement takes place.

Aural tuberculosis may occur at any age, from childhood to advanced life; but the comparatively mild cases, where there is no evidence of general infection but simply associated with glandular enlargements and the so-called strumous diathesis, occur most frequently between the ages of two and twelve years.

From recent studies of the tympanic cavity in tubercular individuals, authorities have become more and more convinced that this organ was involved in a greater number of cases than was commonly supposed. Habermann[3] found tubercle bacilli in purulent discharge from the middle ear in five out of twenty-four individuals, all of whom finally succumbed to tuberculosis; while Nathan[4] found the tubercle bacilli present in twelve out of forty cases. In all but three of the cases in which this microorganism was discovered there were present marked evidences of pulmonary tuberculosis; in the three cases presenting no evidence of general tuberculosis, carious degeneration of the bone of the tympanic cavity had progressed to a considerable degree.

Impairment of hearing in tuberculous subjects, with or without physical evidences of middle-ear infection, has been found present in twenty-eight cases out of two hundred and ninety-four, thus making a percentage of two and four-tenths as the average of infection of the auditory apparatus in tuberculous individuals. Milligan,[5] who has made a careful study of this subject both clinically and experimentally, says that primary tuberculosis of the middle ear is much more frequent than is commonly supposed. I hesitate to accept this statement, however, for the reason stated in the previous part of this paper.

The course of the morbid changes after the tubercle bacilli have been deposited in the mucous membrane of the tympanic cavity may, according to Barnick,[6] be either acute or chronic; the former being rare and associated with general miliary tuberculosis, the changes occurring so rapidly in the body that the aural involvement is not discovered until the autopsy; the chronic form is common and may be modified by the natural resistance of the parts, or conversely by the virulence of the pathogenic organism acting as the etiological factor. Most frequently the chronic form resembles an ordinary non-specific suppuration, running its course without pain; but unlike the regular forms of otitic suppuration it rapidly destroys the tympanic membrane, by breaking down of the small miliary nodules which are deposited in the separate layers of the drum membrane.

The symptoms vary with the progress of the disease and the amount of destruction present. The first indication is the sudden appearance of pus in the external auditory canal, without previous evidence of disease. On examination, the membrana tympani will be found perforated, but no other signs of inflammatory action will be discovered, and the character of the affection will only be ascertained on the discovery of the tubercle bacilli in the pus, or from the rapid development of general or pulmonary tuberculosis subsequent

to the original aural involvement. In general, the symptoms are those of a non-specific suppurative inflammation of a low grade, with caries of the intratympanic bones. Subjective symptoms are infrequent, the purulent discharge alone directing the attention of the patient to the ear disease. The absence of subjective symptoms is due to the insidious nature of the affection—the lack of pain resulting upon "the freedom from reaction possessed by the phthisical organism."

In a few cases examination of the middle ear will elucidate the nature of the affection, but in the majority the objective signs indicate what is apparently the common form of chronic suppuration. The perforation in the membrana tympani is possibly somewhat characteristic; it is circular in outline, its edges are thick and everted, and instead of the congestion of the manubrial plexus and bright-red color seen in ordinary myringitis with perforation, the drum membrane is bluish-white, glossy, and edematous; the color and general appearance much resembling the condition seen over the arytenoid cartilages in tubercular laryngitis. More or less characteristic is the presence of two distinct perforations in the drum membrane. This double perforation is due to the deposit and breaking down of separate miliary tubercles in the drumhead, giving it the appearance of being riddled with shot. When the ossicles are involved, the adjacent bony structures are quickly attacked, and the entire mastoid may break down at a very early period. Associated with these local symptoms is the general condition of the patient, which is so well known as to require no mention here, but an additional symptom of value, when present, is enlargement of the periarticular glands, these being frequently tubercular before the aural affection appears.

In the early stages the nodules present in the middle ear are about the size of mustard seeds—round, sharply defined, and scattered irregularly over the entire mucous membrane. When touched with a probe they are found to be hard and resistant, and are readily dissected out from the tissue in which they lie embedded. As the disease progresses the tubercles increase slightly in size and are greatly augmented in number; the cells forming the tubercle also rapidly increase in quantity, shutting off the blood supply and causing ulceration.

The tubercular process may remain latent in the aural cavity for a considerable time without apparently causing serious mischief, but complications, or rather extensions, of the disease usually occur sooner or later and presage a fatal termination.

Haenel[7] has reported, as a rare complication, a case of incipient rupture of both the membranes separating the middle from the

internal ear, as a result of tubercular caries of the tympanic cavity, both round and oval windows being destroyed; and Bezold[8] says that hyperplasia of the bone of the middle ear and of the foot-plate of the stapes may also occur. Somewhat doubtful is the production of general tuberculosis by a previously existing otitis media suppurativa, but as high an authority as Von Troltsch[9] claims such to be possible, although the connection is as difficult of absolute proof as it is probable on general grounds.

Early diagnosis of tubercle of the tympanum is of great importance, as prompt remedial measures offer a chance for removal of the diseased area in a limited number of cases. It is rarely that a diagnosis of the tubercular nature of the aural discharge can be made from mere inspection of the membrane and middle ear; it is necessary not only to carefully consider the local affection, but to find the tubercle bacilli, and much information can be gained from a microscopical study of a portion of the diseased tissues. Should tuberculosis be suspected and examination fail to discover the specific bacteria, it does not necessarily follow that the affection mentioned is not present in the tympanic cavity, as frequently it is necessary to make examinations at intervals before the character of the disease is conclusively proven.

In practically all cases a microscopical examination for the suspected bacilli is necessary to accurately diagnose the condition. Various methods for staining and differentiating the bacillus are in vogue, but the following is useful in diagnosing tuberculosis of the ear. A minute amount of the pus removed from deep in the tympanic cavity with a sterile platinum loop is smeared over a cover-glass, then dried by passing over the flame of an alcohol lamp, and placed in fuchsin solution. The solution containing the cover-glass is now warmed until it begins to smoke, then, with the cover-glass remaining in it, it is allowed to cool for an hour or two. The cover-glass is then taken out and decolorized with dilute nitric acid and stained with malachite green, and is ready for examination.[10]

The prognosis is unfavorable as regards the hearing, complete deafness usually resulting from disorganization of the middle and destruction of the internal ear, and as the bone becomes involved the danger to life is greatly enhanced; in all cases, therefore, an unfavorable prognosis must be given. Should the tubercles be localized in the ear, operation looking toward removal of the diseased area may be suggested, but must be undertaken with the understanding that rapid miliary tuberculosis of the entire system is apt to result. Locally the various remedies used in laryngeal tuberculosis may be tried. Chloride of zinc, iodoform, and lactic acid are probably the

best, especially the latter under cocaine anesthesia and following curettement of the diseased area. General remedies, as in tuberculosis elsewhere, are necessary to build up the patient to withstand the ravages of the disease as far as possible.

BIBLIOGRAPHY.

1. Voltolini: *Monatsschrift für Ohrenheilkunde*, xviii.
2. Burnett: Diseases of the Ear.
3. Habermann: *Zeitschrift für Ohren.*, vi Bd.
4. Nathan: *Deutsches Archiv für Klin. Med.*, 1894.
5. Milligan: *British Medical Journal*, Nov. 16, 1895.
6. Barnick: *Archiv für Ohrenheilkunde*, March, 1895.
7. Haenel: *Zeitschrift für Ohrenheilkunde*, December, 1895.
8. Bezold: *Archives of Otology*, January, 1896.
9. Von Troltsch, quoted by McBride: Disease of the Ear, etc.
10. Grüber: Diseases of the Ear.

MULTIPLE SCLEROSIS.*

BY J. W. IRWIN, M.D., LOUISVILLE, KY.

Three years ago I was consulted for the first time by Mr. S. H——, aged fifty-two years, a merchant engaged in active business. He was complaining of dull diffused headache, periods of defective memory, mental depression, fatigue, muscular weakness of his left arm and leg, with paresthesia of the affected side. There was double vision of the right eye, and tremors about the eyes and mouth. He complained of difficulty in remembering words, but his speech did not appear to be defective. He had paroxysms of coughing without expectoration, and there was no throat, pulmonary, or cardiac disease. In walking the left leg swung into place, and occasionally the toe would drag on the ground. The weakness seemed to be confined to the extensor muscles.

The paralysis, if at all present, was slight. There was no reaction of degeneration; the muscles responded promptly to the use of electricity.

The reflexes of the diseased side, both superficial and deep, were slightly increased. Sleep was disturbed by dreams and convulsive movements of the muscles of the affected limbs. He complained of a painful diffidence on attempting to use his left hand because of tremor over which he had no control.

Appetite was good, bowels regular, and there was no evidence of kidney or bladder disease. He had not had syphilis. He did not use intoxicants to excess. The daily use of stimulants was not more than

* Read before the Louisville Clinical Society.

a glass or two of beer or wine. He is well-nourished, of a ruddy complexion, five feet ten inches in height, and his weight is two hundred and ten pounds.

The family history shows that one maternal uncle died insane and one died of diabetes mellitus. He has no definite knowledge of his paternal ancestry. Two brothers died of apoplexy before the age of fifty, and one sister is afflicted with hysteria.

Believing that the symptoms indicated the approach of apoplexy, the patient was given a purgative of calomel followed by salines, and advised to restrict his diet to the use of bland, unstimulating articles of food. He was also advised to lay aside the cares of business and to live more of an outdoor life.

Iodo-bromide was prescribed three times daily, and this treatment was continued for about three months. Improvement in the arm and leg had taken place, but the diffused dull headache, tremors, and muscular spasms had not improved. The defective vision in the right eye had been better and worse, but no permanent improvement could be observed.

By the advice of another physician the patient made a tour of Europe, and he did not again come under my observation for upward of six months.

Shortly after returning to this country he again consulted me, and I found that he had not been improved by his trip abroad. No marked change had taken place in the left arm and leg, but the right arm and leg had now become involved, as was the left, and tremor had become more annoying. He found it often impossible to use a spoon or cup with his right hand unless supported by his left. The eye symptoms had grown worse and vision more defective. Speech had become more troublesome, at times slow and imperfect. The former diffidence was now replaced by an indifferent, complacent expression of countenance.

The former treatment was resumed, to which was added massage and electricity. The patient complained of numerous strange sensations as if his spine was spreading or growing shorter, or as if he was a jellyfish.

After three or four months of continuous treatment improvement in the right arm and leg was apparent, but there was no permanent improvement in the mental condition or in sensations. On the contrary, a steady decline in the functions of the cerebral centers was apparent. The right side had improved more than the left, and muscular power had returned. He still complained of paresthesia.

Within the last few months the left side has again been attacked as before, and some extensor muscles of the leg are paralyzed. There

is also edema about the ankle. Sharp pains occurring in paroxysms, vertigo, and insomnia are added to his former symptoms. He has occasionally slight fever and irregular pulse. Headache and defective vision have become more troublesome and at times are much worse than formerly. The bowels and bladder are more sluggish. Nystagmus, tinnitus aurium, and contractions of the muscles of the affected limbs are complained of. Speech is slow and questions are answered with hesitation.

The case, I now believe, is one of disseminated sclerosis. Time has been an important factor for the physician in helping to reach a correct diagnosis. At first the symptoms were too indefinite to make any opinion certain. While the true nature of the disease was not wanting in etiology and symptoms, yet at the age of the patient it was rather unusual. His personal appearance and history seemed to point more forcibly toward apoplexy. Disseminated sclerosis is a disease which affects the first half of adult life and is rarely observed later.

When we bear in mind the pathological anatomy of the disease, with its sclerotic patches affecting the brain, spinal cord, and nerves, the prognosis must be unfavorable. The effect of treatment on degenerative changes in those parts has been without good results. Yet some benefit seems to have been derived from treatment, and patients have lived for many years in this miserable condition. Mercury and iodine hold the first place in the treatment; massage and hot baths are also said to be useful.

A CASE OF DOUBLE INGUINAL HERNIA WITH PROLAPSE OF THE RECTUM CAUSED BY AN EQUESTRIAN ACCIDENT.

BY W. THORNTON PARKER, M.D.,

Formerly A. A. Surgeon, U. S. Army.

The following case is interesting in showing how apparently severe equestrian accidents may not result fatally. In this case grave internal injuries were expected as a result of the extraordinary occurrence. The affair took place some time in the summer of 1867, when a command of the Third United States Cavalry was marching through the Indian country, or the great desert of what is now Kansas. We had a command of about three hundred and fifty officers and men. Besides more than a hundred wagons and ambulances, we started with nearly five hundred extra cavalry horses for supplying cavalry in New Mexico. The command left Fort Leavenworth, Kansas, in May, and reached Fort Union in New Mexico the middle or latter part of July. The year 1867 was a "lively" one on the great plains. All the Indian

tribes were on the war-path and fighting in concert against the pale-faces. We marched as through an enemy's country, with caution and alertness, forming a protected corral with wagons constantly, like the laagers of the Boers in the present war. We followed the old Santa Fé trail, and along the "Arkansaw" we had need of all the wisdom and skill our brave commanding officer, Major Whiting, possessed. The Indians were active and constantly threatening, and at the Cimarron crossing our chances seemed at one time well calculated to cause anxiety.

In spite of the presence of our Indian foes, ever dogging our footsteps and watching for an opportunity for successful attack, many of the recruits deserted, carrying off horses and arms. Many of these recruits were regular adventurous horse thieves, who had enlisted at Carlisle Barracks, Pennsylvania, and who expected opportunities to reach the frontier and steal horses and arms. Indeed, they had planned to rob the paymaster and to carry off his wagon and safe, which was supposed to contain many thousands of dollars. So frequent were the desertions, and so great was the loss of horses, that new mounts were constantly in demand, and that is how the splendid great iron-gray cavalry horse was discovered. The first recruit who attempted to ride him got off in some manner unknown to cavalry regulations, and after several others had made an effort to stay on his back he was declared to be a bad horse, and was for a time left alone. Finally one of the non-commissioned officers, a strong, handsome cavalryman, asked permission of the commanding officer to ride the horse. It was granted with considerable hesitancy, and the whole command turned out to see what was pretty certain to be a life-and-death struggle between man and horse. The charger was a picture to look at; he was a powerful beast, iron-gray, with an eye like an eagle's, and with a carriage which made him fit for a prince, if any prince on earth could but ride him. The sergeant was as perfect a manly figure of courage, intelligence, and physical strength as the beast in his equine beauty. They eyed each other for an instant, when with a firm bound the soldier seated himself in the McClellan saddle. Then the battle began in earnest, rider and horse exerting every skill imaginable to triumph. In spite of plunge and leap the soldier kept his splendid seat, proud master of the beast beneath him. The battle lasted several minutes and was a fierce encounter. Every man who looked on was proud of the manly prowess of the soldier. The horse was in a fury of despair, and finally with one mad dash he flung himself upon the ground and rolled over the body of his fallen rider. A cry of horror and distress rose from the spectators, and we rushed forward to bear the body of the unconscious horseman to the hospital tent. Not a

bone was broken, but upon examination we found inguinal hernia on each side, with a serious prolapse of the rectum. When the man was able to be about it was evident that his days of usefulness as a soldier were past, and he received a discharge.

The horse lost the fire in his eye, and was after the battle a cowed and subdued creature any recruit could ride.

It was a duel as complete and perfect as if it had been fought with swords; it was a wrestling match in which both contestants were hopelessly worsted.

From reports by Dr. John G. Davis, major and surgeon of volunteers, chief sanitary officer of Havana, it appears that the work done in the sanitation of Havana during the year 1899 was as follows: 41,552 examinations of premises were made; 34,241 written notices were issued; 9039 premises were disinfected: 4576 cartloads of rubbish were removed; 25,497 examinations of cesspools were made; 6769 cesspools were cleaned; 207 analyses of food products were made; 36 bacteriological examinations were conducted; 347 food products were destroyed; 298 horses were treated; sewer and catch basins were cleaned and disinfected in 40,579 instances; 1234 houses were newly supplied with water; public urinals were cleaned and disinfected in 4879 instances; an average of 24,000 gallons of electrozone was applied daily in streets, sewers, and houses; 253,583 linear feet of old sewers were cleaned and disinfected; 1,731,982 square meters of street area were cleaned daily; 400,298 square meters of pavement were removed; and the plumbing was modified in 2424 houses. There were 284 cases of yellow fever during the year, with 103 deaths. The population of the city is estimated at 220,000.

According to the *Journal of the American Medical Association*, a permanent committee on malaria has been appointed by the Paris Academy of Medicine, consisting of Laveran, Kelsch, Blanchard, Railluet, and Vallin, "for the study of paludism." A resolution was adopted urging that a scientific mission be sent to Algeria to study the question of transmission of malaria by mosquitoes, and prophylactic measures. England now has two schools and two "expeditions;" Germany, one school and the Koch expedition; Italy has a society for the study of malaria; Belgium has recently founded a laboratory in the Congo; and special courses for instruction in tropical diseases have been opened in Holland and in this country. France has been hitherto content with Laveran's discovery of the malarial parasite as her contribution to science in this line.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE PREVENTION OF SEASICKNESS.

Now that the season of summer travel has begun, ocean voyagers will be interested in the opinion of Dr. Hermann Partsch, of Brooklyn, who thinks it altogether unnecessary that travelers should suffer from seasickness to the extent that they now do. If the true theory of seasickness be understood, this malady, he thinks, can be reduced to a minimum of one-tenth of what it now is. His theory seems to be somewhat as follows:

Steamship motion he finds to be composed of twenty-six different factors. This in itself is a discovery which almost equals that of the German scientist, who found that a pair of shoes could have six hundred and sixty-six conceivable faults. Steamship motion is therefore very complicated, and, of course, incomprehensible at first. The animal mechanism cannot adjust itself to it. The vaso-nervous system is first disturbed, and as a result of this the circulation is affected. The first important result is the relaxation of the abdominal blood-vessels, followed by depletion of the cerebral vessels. This deficiency of circulation in the brain is the objective correlative of the peculiar nausea. If the patient does not promptly lie down, retching will take place. Retching is nature's attempt to reestablish vascular equilibrium, her method of flooding the brain with blood. Regurgitation of the contents of the stomach is merely accidental. The stomach has nothing to do with seasickness except to be incidentally and accidentally implicated. By the time a patient has been seasick for a few days, this retching has debilitated him. The sense of hunger will be obscured by nausea. To recover from seasickness one must, therefore, keep his blood saturated with nutritive material, and for this reason he must eat. To eat seven times a day is about right. One suffering from seasickness is to be directed therefore to eat over and

over again, and to eat especially ten minutes before rising in the morning. Porter or stout is good, but it matters little what it is that is eaten provided it is what one wants. When one is already seasick, those liquids are best which require least digestion. The sicker the patient, the oftener he must eat, though less at a time, and when he feels a repugnance to all other foods, porter or stout, taken without raising the head, directly from the bottle, a mouthful at a time, at five-minute intervals, will, it is said, prove a great success. The worst case of seasickness can be made comparatively comfortable in thirty minutes by lying down without a pillow, closing the eyes, and taking a pint of porter or stout in six doses at five minute intervals.

The author of this line of action makes several valuable suggestions as to the manner in which a traveler should conduct himself when taking an ocean voyage. He is to make no preparation calculated to avoid seasickness. He is to continue his usual ways. He must strive to have the air of his stateroom about as good as the air outside, and have two large openings in the room, if possible. Anywhere on the ship, in his birth, or in his chair, he must keep the eyes closed during the daytime, with the exception of intervals of short duration. Optical vertigo, it will be remembered, has been considered by some writers upon the subject of seasickness to be the sole cause of the trouble. When the slightest sensation of illness is felt, he must lie down at once and close the eyes. Use only one pillow. A single pillow will sometimes make all the difference between great misery and almost absolute comfort.

The writer considers that if these directions be fully and faithfully executed, a sea voyage can be accomplished with very little discomfort. Nevertheless, the dreaded *mal de mer* will probably continue to be the principal deterrent to universal ocean travel.

EDITORIAL NOTES.

The American Medical Association.

The last meeting of the American Medical Association at Atlantic City was an unqualified success. Every visitor was comfortably housed and well taken care of. The scientific work was of a high order. The usefulness of the organization cannot but be augmented by such successful gatherings.

ITEMS AND NOTES.

PLAGUE has again broken out in Honolulu.

MEASLES is epidemic among the troops in Halifax.

THE centenary of the Royal College of England will be celebrated at the end of July.

THE will of Julius Adams, of Boston, leaves $25,000 to the Carney Hospital of that city.

THE number of women studying medicine in London has increased nearly fifty per cent in three years.

SUCCI, the Italian faster, has been declared to be insane and is now under confinement in an asylum.

AT the recent examinations of the Ohio State Medical Board 250 received licenses to practice medicine.

A BANQUET was tendered Professor von Bergmann, of Berlin, recently by 300 of his friends in the profession.

AN International Congress of Gynecology and Obstetrics has been announced to be held in London some time in 1902.

THE annex to the Pasteur Institute, which comprises a hospital and laboratories for biological chemistry, is now complete.

SINCE pigs were introduced into the New Hebrides, the natives, it is said, have come to regard human food as second best.

DR. M. C. WHITE, professor of pathology in Yale University, has resigned. His place will be filled by Dr. Charles Bartlett.

PROFESSOR E. KLEBS has resigned the teaching appointments which he has held for some years in Chicago, and intends to return to Germany.

DR. J. H. GIRDNER, of New York, owns a dress coat made for the wedding of his grandfather by President Andrew Johnson, who was at that time a tailor.

THERE is a bill before the British Parliament to make the office of medical officer of health a permanency, and one that gives its owner a right to a pension.

Fifteen were graduated from the California Medical College at the recent commencement exercises. One of the number was a Chinese student.

A sum of 8000 lire has been set aside in the Italian budget toward the expenses of the International Physiological Congress which is to be held in Turin in 1901.

It is reported that a Vienna dentist has discovered a means of killing bacteria in a human body by a current of electricity so weak as to be barely perceptible.

Dr. John Wylie has been appointed to the chair of medicine in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart.

Free admission to the Paris Exposition will be granted to the members of the International Medical Congress during the week of the Congress, August 2 to 9.

Dr. Eduardo Wilde, the new minister to the United States from Argentina, was formerly minister of public instruction, and is known for his studies in yellow fever.

The new children's hospital at Athens is arranged with twelve separate pavilions, each designed for a different disease. Four are reserved for contagious diseases.

In 1899 the American people spent for alcoholic drinks of all kinds $973,589,080, and for coffee, tea, and cocoa $173,308,742, making a total "stimulant" bill of $1,164,897,822.

The latest offer to colleges by Dr. D. K. Pearsons, of Chicago, is one of $50,000 to Carleton College, Northfield, Minn., providing the authorities raise $100,000 by January, 1901.

The Municipal Council of the city of Paris has voted 20,000 francs ($4000) to the International Medical Congress, and 10,000 francs ($2000) to the International Congress of Hygiene.

Dr. John Cameron, who lately resigned, on account of advanced age, his position of physician to the Royal Southern Hospital, Liverpool, had been actively connected with the institution for fifty-two years.

The Royal Society is about to elect into its distinguished body Dr. Patrick Manson, physician to the colonial office, whose work with regard to the rôle of mosquitoes in the transmission of malaria is well known.

THE international executive commission of the Pan-American Medical Congress announces that the third meeting of that body will be held in Havana, Cuba, on the 26th, 27th, 28th, and 29th of December, 1900.

THE oldest practitioner of medicine in the United States is claimed to be Dr. John P. Wood, of Coffeyville, Kansas. He is in his ninety-ninth year, and still devotes a large part of each day to his profession.

CIGARETTE smoking is not to be allowed on the exposition grounds in Paris. Violators of an order forbidding this sort of fumigation, recently issued by the Parisian chief of police, will be arrested and subjected to heavy fines.

SOME of the London doctors are going in strongly for a new and fashionable cure for their adult patients who suffer from indigestion, etc. They prescribe a quarter of an hour's vigorous exercise in the morning with skipping-ropes.

THE Roentgen Ray Society of the United States has recently been organized. Dr. Heber Robarts, of St. Louis, is president, and Dr. J. Rudis-Jicinsky, of Cedar Rapids, secretary. The regular meeting will be held in New York in December.

THE University of Maryland has filled the vacancy in the chair of therapeutics created by the resignation of Dr. I. Edmondson Atkinson, by assigning that department to Dr. Charles W. Mitchell, who will fill both this and the chair of pediatrics.

THE Baltimore quarantine physician has received strict instructions with regard to the introduction of plague into that city through ships coming from South American points, especially Rio Janeiro, where the disease appears to be getting a foothold.

ROOSEVELT HOSPITAL has made an appeal for $500,000 to carry on its work. Since 1881 five departments have been added to the hospital, and the ambulance service is now heavier than ever before, having had nearly 5000 ambulance calls in the past year.

THE will of the late Jonas G. Clark, of Worcester, Mass., who founded Clark University in 1889, was filed in the probate court of that city the other day. The entire estate is left to the university, provided the people of the city raise a fund of $500,000.

A USEFUL addition to the dietary of invalids in England has been made in the shape of Siberian partridges, which are killed when in prime condition and conveyed frozen by sleigh, rail, and boat to London. They are said to be remarkably tender and delicate eating.

According to the *St. Petersburger Medicinische Wochenschrift*, the Russian railroads are to be equipped with special cars for the transportation of sick persons. They are to be made with three separate compartments, one for infectious diseases, one for ordinary diseases, and one for insane patients.

An interesting calculation has recently been made by an English statistician, in which he shows that when the electric light has entirely displaced gas, oil lamps, and candles in the United Kingdom there will be 40,000 deaths less annually, these illuminants being so much more unhealthful than electricity.

One of the most distinguished British surgeons in South Africa says the things that have impressed him most are the merciful wounds made by the rifles in use, the popularity of the *x*-ray, and the ineffectiveness of artillery to destroy life. The loss in killed is insignificant in comparison with the battles of the past.

The statutes of the Moscow society for the establishment in that city of an institute for the education of women for the medical profession have been settled. The society proposes to collect funds for the establishment and up-keep of the institute by means of voluntary contributions, popular lectures, theatrical representations, concerts, balls, etc.

Dr. Rudolf Amandus Philippi, of Santiago de Chile, is about to celebrate the seventieth anniversary of receiving his doctor's degree from Berlin university. Dr. Philippi is professor of botany in the Santiago university and director of the Natural History Museum. He is ninety-two years of age, and attended Alexander von Humboldt's lectures when a student.

The Austrian Ministry of Education has accepted the resignation of Professor Leopold Schenk, director of the Embryological Institute of the University of Vienna. He has been granted a pension beginning from May 1. Till a new director is appointed the duties of the office are to be discharged by Dr. Josef Schaffer, a pupil of the well known histologist, Professor Ritter von Ebner.

According to the *New York Times*, a board of medical officers has been appointed to meet at Camp Columbia, Quemados, Cuba, for the purpose of pursuing scientific investigations with reference to the infectious diseases prevalent on the island of Cuba. The board consists of Major Walter Reed, surgeon; Acting Assistant Surgeon James Carroll, Acting Assistant Surgeon Aristides Agramonte, and Acting Assistant Surgeon Jesse W. Lazear.

THE actual number of registered physicians in the United States, according to the most recent count, shows an average for the whole of about one to 647 inhabitants, but the proportion in the States varies greatly. California appears to be the State which is most liberally supplied, the proportion there being one physician to 420 inhabitants, while in Iowa nearly the same conditions prevail. On the other hand, in North and South Dakota and New Mexico the proportion was respectively one to 1285, 1296, and 1391 inhabitants.

ACCORDING to the *Medical Record*, a mob recently attacked a Chicago dispensary and nearly demolished the building before the rioters were dispersed by the police. The disturbance was caused by a story being circulated to the effect that the physicians had carried a neighbor's child into the dispensary and were cutting him to pieces for medical purposes. After the disturbance the missing child was found. The rioters were mostly ignorant Bohemians and Lithuanians, who had been worked up to a high pitch of excitement by stories of dissections at dead of night and experiments upon kidnapped children.

THE woman's brain, says Mr. Alexander Sutherland, in the *Nineteenth Century*, is always less than the man's. Whether the observations be made in England, France, or Germany, the results are quite unaffected. From Boyd's figures we can pick out 102 men and 113 women between sixty-four and sixty-six inches high, averaging close on sixty-five inches for each group. But the brains of the men average 46.9 ounces, while those of the women are only 41.9, which gives the men an advantage of twelve per cent. There are twenty-one small men whose height averages sixty-two inches, and there are 135 women of the same height. The brains of the men weigh 45.6 ounces, those of the women only 42.9 ounces.

ACCORDING to the *Journal de Médecine de Paris* of April 22, 1900, a well known physician, the director of a "thermal establishment" at Triberg, recently had an altercation with one of his *confrères*. When provoked by the latter, he declined to challenge him, alleging his religious scruples as a cause. As each of the physicians happened to be surgeon-major of reserves, the military tribunal took cognizance of the case, notwithstanding that the incident took place outside of military service, with the result that the physician who declined to fight has received the following order from the Emperor's cabinet: "You are dismissed from your rank as surgeon-major of the reserves because, in spite of repeated invitations made to you to demand, in conformity with the laws of honor, reparation for an insult, you have refrained from challenging your adversary."

On June 1 Drs. Sambon and Low, of the London School of Tropical Medicine, according to the *Medical Record*, began a summer residence in a place in the Roman Campagna where estivo-autumnal malarial fever is most prevalent. They will live in a small wooden building with windows and doors protected with wire screens, which will also be placed under the eaves and over the chimney opening. During the daytime, when the Anopheles, or malaria mosquito, does not bite, they will go about at will, but from a little before sundown to some time after sunrise they will keep strictly within doors, although still exposed to the air and soil emanations. Their drinking-water will be the same as that used by other residents of the Campagna, and in fact all their conditions of living will be the same, save only that they will be preserved from the stings of the night mosquitoes.

According to a recently published report, the Bacteriological Institute of the University of Moscow, which is under the direction of Dr. Gabritschewski, has in the last five years sent out about 100,000 flasks of therapeutic serum, of which 88,805 contained antidiphtheritic serum. In 1899, 6000 flasks of antidiphtheritic serum were distributed gratuitously to the municipal hospitals and to necessitous patients in Moscow, and about 8000 to provincial hospitals. The institute, which was founded by private efforts, has received since 1896 a subsidy of 8040 roubles from the Ministry of Education, and since 1895 one of 8500 from the municipality of Moscow. In addition to these sources of income the institute has an annual revenue of 11,000 to 12,000 roubles from the sale of serums. Besides manufacturing serums, the institute gives instruction in bacteriology to medical practitioners.

The German authorities at Bonn some time ago had an investigation upon alcoholism among pupils in the primary schools, which shows a startling state of affairs. Sixteen children out of one hundred did not drink milk, and absolutely refused to drink it because it had no savor. Of 237 pupils, seven to eight years of age, there was not one who had not drunk wine, beer, or whiskey, although twenty-three per cent had never tasted whiskey, but habitually drank beer or wine. Eight per cent of these children were given their glass of whiskey every day by their parents that they might become strong. As a result of these investigations it was proved that children most accustomed to alcohol showed the least intelligence; children who had their morning glass of whiskey and found no savor in milk showed it by great inattention during the morning hour. A curious fact shown by this investigation was that young girls who took whiskey with their breakfasts were more numerous than young boys.

NEW PUBLICATIONS.

SAUNDERS'S QUESTION COMPENDS.

The seventh edition of this useful book has been called for, which is in itself sufficient evidence that the author's efforts to provide the student with a satisfactory manual of the study of surgery have not been futile. The new edition has been subjected to thorough revision and harmonizes in spirit and tact with the present status of surgical theory and practice.

Saunders's Question Compends No. 2. Essentials of Surgery, Together with a Full Description of the Handkerchief and Roller Bandage, Arranged in the Form of Questions and Answers Prepared Especially for Students of Medicine. By Edward Martin, A.M., etc. Illustrated. Seventh Edition, Revised and Enlarged, with an Appendix. Philadelphia: W. B. Saunders, 1900.

A HANDBOOK FOR NURSES.

The author of this work has very successfully added another to the already numerous text-books on this subject. A happy medium has been reached in regard to the vexed question of how much medical knowledge should be imparted to nurses. The essential facts and principles of anatomy, physiology, and the practice of medicine have been judiciously commented upon. The chapters on Specific Fevers will be found specially valuable, and the duties of the nurses in relation to general and special operations have been happily described. A very useful appendix includes a description of certain appliances with which every nurse should be familiar. The handbook will be found especially suitable for the training school.

A Handbook for Nurses. By J. K. Watson, M.D. Edin., etc. American Edition, under the Supervision of A. A. Stevens, A.M., etc. Philadelphia: W. B. Saunders, 1900.

INTERNATIONAL CLINICS.

The new volume of International Clinics contains more than the usual number of interesting practical lectures. The tendency of this last volume seems to be more strictly clinical and practical in spirit. Current medical topics are discussed in a felicitous way.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., Director of the Ayer Clinical Laboratory of the Pennsylvania Hospital, with the Collaboration of John Ashhurst, Jr., M.D., and Charles H. Reed, M.D., of Philadelphia, and James T. Whittaker, M.D., etc., of Cincinnatti. With Regular Correspondents in Montreal, London, Paris, Leipzig, and Vienna. Volume I, Tenth Series, 1900. Philadelphia: J. B. Lippincott Company, 1900.

TUMORS.

A treatise on the pathology and surgical treatment of tumors needs no apology, as books devoted to the subject have been very few during the last few years. In the second edition of this excellent work the author is unable to record any particularly new discoveries or advancements regarding the nature and treatment of tumors. The para-

sitic origin of malignant tumors is a doctrine which still continues to attract scientific attention, but little progress has been made in establishing the theory by actual facts. The reputation of the author of the present work is a sufficient guarantee that the matter has been thoroughly canvassed. It is a full and complete account of malignant growths from the etiological and pathological standpoints. The work has been very aptly illustrated by a large number of engravings, more than one hundred of which are original. No expense has been spared in presenting the work to the profession, and as a text-book on the subject it will meet all the necessities of the student and practitioner.

The Pathology and Surgical Treatment of Tumors. By N. Senn, M.D. Second Edition, Revised. Illustrated with 478 Engravings, and 12 Full-page Plates in Colors. Philadelphia: W. B. Saunders, 1900.

CLINICAL BACTERIOLOGY.

The authors of this work are well known to possess all the qualifications for their class. The second edition of their book has quickly followed the first. New chapters have been added on several subjects, and numerous changes and additions have been made in other sections of the work. The necessity for the practicing physician to be reasonably familiar with the modern results of bacteriological investigation makes such a work as this one indispensable. In order to possess clear conceptions of the etiology of disease the practitioner must be familiar with the nature of morbid processes. This work discusses the problems of disease from their bacteriological standpoint. It is copiously illustrated and will be found a useful and entertaining work. Not the least valuable will be found the sections on disinfection. The book is bound to score a practical success.

Elements of Clinical Bacteriology for Physicians and Students. By Dr. Ernst Levy, Professor in the University of Strasburg, i. E., and Dr. Felix Klemperer, Privat Docent in the University of Strasburg, i. E. Second Enlarged and Revised Edition. Authorized Translation by Augustus A. Eshner, M.D. Philadelphia: W. B. Saunders, 1900.

INJURIES TO THE EYE.

This work achieved a great reputation in France and was deemed sufficiently interesting to warrant a translation being made. A modification of the legal aspects of the question treated of has been made in accordance with American views of law. The work deals with many interesting questions. The chapter on simulated affections of the eye will be found exceptionally suggestive. The expert's duty of estimating the damage sustained in an injured eye is often one of such great difficulty than any aid to a solution of the problem that he encounters will prove exceptionally welcome.

Injuries to the Eye in Their Medicolegal Aspect. By S. Baudry, M D., Professor in the Faculty of Medicine, University of Lille, France. Translated from the Original by Alfred James Ostheimer, Jr., M.D., of Philadelphia, Pa. Revised and Edited by Charles A. Oliver, A.M., M.D., Attending Surgeon to the Wills Eye Hospital; Ophthalmic Surgeon to the Philadelphia Hospital; Member of the American and French Ophthalmological Societies, etc. With an Adaptation of the Medicolegal Chapter to the Courts of the United States of America, by Charles Sinkler, Esq., Member of the Philadelphia Bar. 5⅝ x 7⅞ inches. Pages, x-161. Extra cloth, $1.00, net. Philadelphia: The F. A. Davis Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Anesthesia by Cocaine.

Professor Tuffier, of Paris, has published (*Medical Press and Circular*, May 23, 1900) a very interesting account of operations done by him under the influence of general anesthesia produced by injections of a solution of cocaine under the arachnoid of the medulla. He operated in this way on sixty-three patients with complete success, and his operations were of the lower limbs, the perineum, rectum, abdomen, genito-urinary organs, external and internal, of both men and women. For the operation he uses an ordinary Pravaz syringe, but the needle is of a special kind; it is made of platinum, two and a half inches in length, and the point beveled. The solution of cocaine that he employs is two-per-cent in strength; it is sterilized and of recent make. The patient is placed in the sitting posture with the anus placed in front. The lumbar region is rendered aseptic by soap and water and subsequent washing with alcohol. The iliac crests being taken as points of repair, a line is drawn between the two passing across the lumbar vertebræ (spinal apophysis); the penetration into the medullary canal is under this line. The index of the left hand marking the spinal apophysis, the patient is told to incline the body strongly in front so as to render the lumbar region prominent. A separation between the fifth and sixth vertebræ of nearly half an inch is thereby effected. At this point of the operation Professor Tuffier warns the patient that he will cause him very sharp, slight pain, and he is to keep still. Seizing the needle, only with the right hand, he passes it in on the right of the vertebral column at a quarter of an inch of the line and close to the index placed on the apophysis; the needle thus passes through the skin, cellular tissue, lumbar aponeurosis, the sacrolumbar muscles, the aponeurosis of the quadratus, and finally reaches the rachidian canal through the fellow ligament. If the needle is really in the subarachnoid space, a few drops of clear yellowish liquid escapes (cephalo-rachidian liquid); the surgeon should not inject the cocaine before he can see this liquid oozing out.

The syringe at this point is filled with the two-per-cent solution, is adapted to the needle, and the injection is slowly poured in, drop by drop, as it were, until half the syringeful is employed—that dose should not be exceeded. At the end of from four to ten minutes the patient

experiences a sensation of pins and needles in the legs, and numbness, mounting up in some cases to the axilla. The moment has arrived to operate, for the analgesia is complete and absolute, and lasts an hour and a half. In this way M. Tuffier was able to amputate at the thigh in several cases, and the patients interrogated said they only felt a sensation of contact. One of these, hearing the sawing of his femur, said he did not know whether it was his leg or that of the table that was being cut. A woman who had the uterus removed *per vaginam* said after the operation that she felt at the time that the uterus was being pulled forward, that something got unhooked, but she felt no pain.

The Surgical Treatment of Facial Neuralgia.

M. Chipault, who has made a specialty of the surgery of the nervous system, read some most interesting observations before the Paris Academy of Medicine (*Lancet*, June 2, 1900) at a recent meeting of this society. The surgical treatment of rebellious forms of neuralgia has hitherto given very unsatisfactory results. Peripheral resections of the trigeminal nerve are not dangerous, but give relief lasting only a few months. Resection of the Gasserian ganglion gives better results, but is a dangerous operation, for the mortality-rate is not less than twenty-five per cent. On the other hand, the pathology of facial neuralgia, which so often arises as an accompaniment of a condition of arterial sclerosis, would lead one to imagine that it is a condition of vasomotor origin. Anyway, many of the symptoms which accompany it are of vasomotor origin, and go to prove that there exists some common cause, not of the neuralgia itself, but of something which sets the neuralgia in action. Given these conditions it is a logical mode of treatment to employ resection of the superior cervical ganglion of the sympathetic, a ganglion which furnishes vasomotor filaments, not only to the branches of the trigeminal, but also to the Gasserian ganglion and its central roots. M. Jaboulay had a successful case under this treatment.

After consultation with M. Abadie, M. Chipault decided to perform the operation upon a man, aged sixty years, who for thirty-eight years had suffered from a very persistent and acute form of neuralgia which increased in severity as time went on. The pain was especially marked in the region supplied by the superior maxillary nerve. After everything had been tried without success, more particularly opium and sulphate of quinine, the patient underwent the above mentioned operation. Within forty-eight hours afterward his pain had gone and he experienced nothing but a slight feeling of heat in the gum. This

case bears out the correctness of the theory that facial neuralgia is due to some vasomotor cause.

M. Chipault remarked that this operation is neither dangerous nor disagreeable, a fact which he has demonstrated by having performed it in some fifty cases. Moreover, the scar is in the neck and not in the face, and therefore hardly visible, and the patient is spared the subsequent annoying anesthesia, which is so trying a feature of operations upon the trigeminal nerve.

Total Resection of the Spermatic Cords vs. Castration and Vasectomy in the Treatment of Prostatic Hypertrophy.

G. Frank Lydston (*International Journal of Surgery*, June, 1900) says he prefers, as a substitute for both castration and vasectomy, total resection of the cords, an operation which has proved reliable in his own experience. It is obviously more rational and more effective than vasectomy, and superior to castration, for the following reasons:

1. It produces less traumatism, a very important item in old men.
2. There is less danger to the kidney, because of minimized shock.
3. The testes not being removed, there is none of the psychic disturbance incident to a consciousness of the loss of the testes.
4. Cocaine may be more safely used.
5. The subsequent shrinking of the testes is so gradual that little complaint is made.

Apropros of the danger of renal disturbance following castration, the writer is satisfied that quite a proportion of the "peculiar" cases of mental aberration and delirium following the operation are uremic.

On Removal of the Cervical Sympathetic in Glaucoma and Optic Nerve Atrophy.

From a study of the cases of sympathectomy made by Jonnesco and others, and from observations of his own cases, J. M. Ball (*Journal of the American Medical Association*, June 2, 1900) offers the following conclusions:

1. Excision of the superior cervical ganglion is a most valuable procedure in glaucoma.
2. It is of more value in glaucoma simplex than in inflammatory glaucoma.
3. In inflammatory glaucoma, on which iridectomy has been done without benefit, excision of the superior cervical ganglion should certainly be tried.

4. In cases of absolute glaucoma with pain, sympathectomy is to be tried before resorting to any operation on the eyeball.

5. In cases of simple optic nerve atrophy, sympathectomy may possibly be beneficial if done before vision is entirely lost.

6. In cases of exophthalmic goitre, which do not improve under hygienic, medicinal, and electric treatment, excision of the cervical sympathetic on both sides is to be advised.

7. In unilateral glaucoma excision of the sympathetic ganglion is to be done only on the corresponding side.

8. In the hands of a careful operator excision of the superior and middle ganglia is a safe operation, but removal of the inferior ganglion can be done safely only by the most skilful surgeons.

9. The postmastoid route is to be preferred in excision of any part or all of the cervical sympathetic.

10. The fact that glaucoma is improved by sympathectomy and the finding of pathologic changes in the excised ganglia suggest the conclusion that this affection is due either to a permanent irritation of the cervical sympathetic, or to an irritation located elsewhere and transmitted by means of the cervical sympathetic.

Cervical Adenitis: Etiology and Treatment.

Jessen (*Centralbl. f. Innere Med.*, 1899, No. 35) believes that so-called cervical lymphomata proceed almost in every case from injections through Luschka's tonsil, the pharyngeal tonsils, and through carious teeth, and recommends removal of these for the cure of even long-standing infiltrations. He reports six cases, all successful, in two of which incurable fistulæ remaining after removal of enlarged lymphatic glands disappeared within eight and fourteen days after final excision of Luschka's tonsil.

Urethral Capacity and Syringes.

Loeb (*Munch. Med. Woch.*, 1899, No. 31) concludes from his researches along this line, conducted exclusively upon patients suffering from subacute, chronic, and exceptionally from acute gonorrhea, that the capacity of the anterior urethra varies between six and twenty cubic centimeters, and that while no external landmark allows of gauging this capacity in individual cases, yet it is required to fill the urethra to the limit, so that it becomes necessary to measure this capacity in every case before ordering an appropriate syringe.

MEDICINE.

Analgesia of the Ulnar Nerve in Epileptics.

Lannois and Carrier (*British Medical Journal*, June 9, 1900), found that in 130 epileptics, of whom fifty were males and eighty were females, sensation to pressure on the ulnar nerve at the elbow was, as regards males, normal on the two sides in twenty-seven out of fifty cases, normal on one side only in four cases, diminished or markedly obtuse on both sides in eleven cases, and diminished on one side in six cases. There was complete analgesia on both sides in five cases, and on one side in four cases. In other words, the male epileptics showed ulnar analgesia in fourteen per cent of the cases, diminished sensibility in twenty-eight per cent, and normal sensibility in fifty-eight per cent. The eighty women gave the following results: Sensibility was normal on the two sides in forty cases, and diminished on the two sides in eleven cases. Eleven cases showed a diminution of sensibility on one side only. There was ulnar analgesia on both sides in fourteen cases, and on one side in ten cases. The female epileptics thus showed ulnar analgesia in 24 per cent of the cases, diminished sensibility in 20½ per cent, and normal sensibility in 55 per cent. The percentages in the two sexes were as follows: Ulnar analgesia, 20; diminished sensibility, 23½; and normal sensibility of the ulnar nerve, 56½. The authors conclude that ulnar analgesia may be regarded as a diagnostic sign of minor importance, but that it cannot be taken as a sign of value in differential diagnosis from hysteria, for example. Analgesia was present in a large number of cases after an epileptic fit, but any marked analgesia generally disappeared about twelve hours after the attack.

Chorea and Menstruation.

Dr. Gentian, in the *Archivos Ginecopatia*, adduces some interesting facts in support of the influence of menstruation on chorea. He gives the following statistics showing the ages of the patients at the onset of the symptoms of chorea: From five to ten years, 18 cases; from ten to sixteen years, 45 cases; from sixteen to twenty years, 13 cases. He found that when the menses appeared the chorea ceased; when, however, the flow was insufficient in amount or deficient in color, the function had no influence on the disease. That women during pregnancy are subject to chorea is universally recognized; from the clinic of Baudeloque, from 1889 to 1899, the author finds there were fifteen cases of chorea out of the 15,638 deliveries—one in every 1042 cases.

Of these ten occurred in primiparæ. Of the 15,638 mothers eighty-nine had had chorea as children; of these fifteen had a severe form of the malady. He concludes that children who suffer severely from the disease prior to their menstrual period are liable to be attacked with the disease during their pregnancy. The treatment recommended for children and adults is chloral in full doses; during pregnancy the patient is to be put on a milk diet.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Etiology of Tumors.

Carini (*Il Policlinico*, April 15, 1900) has conducted a series of experiments with a view to solving the so-called blastomycetic origin of cancer. Out of fourteen tumors removed from the living subject and examined with every possible aseptic precaution, not one gave any culture of blastomycetes. The fifteenth (received twelve hours later) gave a culture, but this was probably due to contamination from the surroundings. Injections of pure culture never gave rise to true malignant tumors. Out of forty-four tumors (mostly malignant), eighteen on histological examination showed the presence of blastomycetes or of Russell's corpuscles, which are morphologically the same thing. But these same bodies were found in many other non-malignant tumors, and even in normal tissues—for example, the prostate. The bodies described in tumors as parasites (for example, coccidia, sporozoa) for the most part do not stain in a manner characteristic of blastomycetes.

The author's researches do not favor the blastomycetic origin of cancer. The article is furnished with a full bibliography of the subject and drawings of the histological appearance.

THERAPEUTICS.

The Treatment of Tuberculosis.

At the congress recently held at Naples (*British Medical Journal*, May 26, 1900) several communications on the treatment of tuberculosis were presented. De Renzi delivered an address on the actual state of the therapeutics of tuberculosis. He said that, putting aside prophylactic treatment and treatment in sanatoria, the field of therapeutics

of tuberculosis is now much restricted. Of pharmaceutical remedies, two only need be considered—creosote and iodine. The former had been given in the most varied forms and doses, but the only definite effect which it produced was the diminution of expectoration; this is not to be wondered at, seeing that to obtain complete sterilization of a person of medium size in regard to Koch's bacillus, about fifty grammes of creosote would be required, whereas the ordinary dose which could be given with safety is from thirty to sixty centigrammes in the day. The substitution of guaiacol for creosote appeared at first to be a notable improvement, but it has been found to be more toxic than creosote, whilst not more efficacious as a remedy for tuberculosis. With regard to the other remedy he has named, iodoform owes its reputation mainly to the large quantity (ninety-seven per cent) of iodine which it contains. The sedative effect which it has on cough and the diminution of bronchial secretion are manifest; but no radical effect on the tuberculous process can be expected either from it or from other preparations of iodine—iodide of potassium, di-iodoform, europhen, aristol, iodol, etc.

With regard to other remedies, De Renzi said that Koch's tuberculin has a very remarkable diagnostic value, which in some degree compensates for its want of curative effect. In slight cases Maragliano's serum might be useful. He thought it needless to say anything about injections of camphorated oil, igazol, etc., because they have all shown themselves of little service in tuberculosis; only somatose and sodium cacodylate have prolonged life a little. Pure air and abundant feeding are the two great remedies on which the modern treatment of tuberculosis should rest.

Roustan has tried sodium cacodylate in tuberculosis. The tolerance of the remedy varied in different individuals, some not being able to bear more than eight injections successively, whilst others could bear thirty to forty. The injections, the dose of which is one cubic centimeter in the day, should therefore be suspended from time to time for a period equal to that during which they have been carried out. As results, he has observed an increase of strength, often a diminution of fever, recovery of appetite, and in some cases improvement in the local lesions.

Gatti has tried various essential oils (myrtle, eucalyptus), certain camphors and antiseptics (phenol, thymol). He usually gives one injection a day for ten days continuously, this period of treatment being followed by five days of rest. As the results he claims decided and permanent increase of muscular power, mitigation of fever and sweats, diminution of cough, modification of physical signs, increase of appetite and body weight, diminution in the number of bacilli.

The Treatment of Epilepsy in its Incipiency.

Wm. P. Spratling, medical superintendent of the Craig Colony of Epileptics at Sonyea, New York, in an article under this heading in the *Buffalo Medical Journal* for June, 1900, says that the physician should make an early differentiation of the type of epilepsy from which the patient is suffering, and that if it be reflex epilepsy, or if the child be suffering from epileptic phenomena, the chances of cure are much greater than if the case be one of genuine epilepsy. If genuine epilepsy be present, we are in a position to give much more accurate prognosis as to the ultimate outcome and to apply better principles in the treatment of the case. It is advisable to remove as far as possible parental sympathy from the treatment of the child, for if allowed to assert its sway it usually does more harm than good. Endeavors should be made to keep from the young epileptic the many patent nostrums that when taken by him only aggravate the disease (1) by masking the true symptoms of the same; (2) by destroying or impairing the functions of the gastrointestinal tract. If the seizures be localized in a given part of the body which is chiefly involved at the time of the convulsive phenomena, and partial paralysis follows as the result of the same, physical means for the correction must be applied for the reflex symptoms as far as possible, for it will be only by these means that such a difficulty can be overcome. Extreme care must be used to administer no food that cannot be readily absorbed and assimilated. Of the newer drugs in the medicinal treatment, the writer says that the fluid extract of horse-nettle berries, a preparation of Parke, Davis & Co., has been tried quite satisfactorily within the past year and with uniformly good results. It appears to have advantages that none of the sedatives of the bromide group possess, for the reason that it does not destroy the functions of the digestive system as the members of the bromide group do. On the contrary, it appears to possess distinctly tonic properties.

Aspirin in Acute Rheumatism.

Friedeberg (*Centralblatt f. Innere Med.*, April 14, 1900, p. 369) reports upon the use of aspirin as a substitute for salicylic preparations.

Aspirin (acetyl-salicylic acid) occurs in white, needle-like crystals; easily soluble in alcohol, hardly so in water; taste pleasant, acidulated. It produces no gastric derangement whatever, which is due to insolubility in gastric juice and subsequent solution in alkaline enteric secretion (Witthauer); no cardiac phenomena, auditory disturbances, or exanthematous rashes. Its therapeutic efficiency is simi-

lar to that of the salicylates, possibly more diaphoretic than the latter. It is exhibited in cachets or in powders. Chronic forms of rheumatism and gout are less amenable to successful treatment with aspirin. On the other hand neuralgic disturbances—especially those occurring in the incipient stages of influenza and complicated with gastric symptoms—are decidedly benefited by the use of aspirin. The same has proved true in cases of sciatic neuralgia and of exudative pleuritis.

From his experience to date Friedeberg concludes that aspirin offers in many cases an efficient and equivalent substitute for the salicylates, and recommends its exhibition preferably in those cases in which we fear the occurrence of gastric irritability, or cardiac or auditory disturbances. Aspirin is preferable to the salicylates where prompt and efficient action is required, *e.g.*, in severe cases of acute articular rheumatism and for the resorption of considerable exudates. Another advantage resides in the possibility of uninterrupted exhibition as compared with the salicylates: aspirin may be prescribed in daily doses of four to five grammes (60 to 75 grains) for a week or more, while the exhibition of salicylates often has to be suspended to avoid untoward effects.

Dermatol in Gonorrhea.

Dokoutschaieff (*Medicinskoe Obosrenie; British Medical Journal*, May 12, 1900) has used dermatol in nineteen cases of acute and eleven of chronic gonorrhea. In the acute cases, when the whole urethra is affected, that canal is first washed out with a tepid solution of boric acid or potassium permanganate two-per-cent. Then with an ordinary syringe or Guyon's instrument the following emulsion is instilled first in the posterior, afterwards in the anterior, part: Dermatol, 2 grammes; powdered gum arabic, 2 grammes; distilled water, 25 grammes. The instillations are repeated every two hours. The emulsion is allowed to remain in the urethra for at least five minutes, and is then allowed to escape in drops. The patient is forbidden to pass water in the meantime. If it is the anterior portion of the urethra that is affected, the treatment should be begun by making instillations in that portion, and after thirty-four days they should be made in the posterior part. In chronic cases, after the urethra has been washed out, a bougie covered with the following pomade is introduced: Dermatol, 0.60 centigrammes; lanolin, 10 grammes; white wax, 2 grammes, The bougie is pushed up to the neck of the bladder, the urethra is then massaged on the bougie for a certain time, the duration of this procedure being progressively increased. These manipulations should

not last longer than twenty minutes, and should not be carried out oftener than twice a day. This treatment has given the author, on the whole, good results. The chronic cases were cured in nineteen to forty-three days, the acute in eight to forty-six. Epididymitis occurred as a complication in three cases. Of the nineteen acute cases the process became chronic in four; of the eleven chronic cases the treatment failed in three.

The Bromide Treatment of the Opium Habit.

Archibald Church (*New York Medical Journal*, June 9, 1900) recommends the use of sodium bromide in the treatment of morphinism. The purpose of bromide treatment is to stupefy the patient utterly for a number of days, during which time the opium is rapidly withdrawn and a physical disturbance secondary to its withdrawal recovered from. The method of administration is as follows: The drug should be given only in the daytime — 120 grains of sodium bromide in half a tumblerful of water every two hours until an ounce is given during the first day. The second day a smaller amount is given in the same way, and this may be sufficient, or it may be necessary to continue the doses in the same way on the third day. It is a safe rule to cease the administration of the bromide after twenty-four hours when drowsiness is so profound that the patient cannot be aroused, or when aroused is incoherent. If the sleep continues or becomes deeper, no more bromide will be needed. It is to be remembered that the bromide acts in a cumulative manner. After the second or third day, when the bromide is withdrawn, drowsiness — in some cases, actual coma—tends distinctly to deepen in forty-eight hours, so that the fully developed sleep presents a rather alarming condition to any one not familiar with it. For two or three days there is difficulty in feeding the patients, and swallowing is sometimes impossible, so that rectal alimentation is required.

Hydrogen Peroxide for the Treatment of Septic Wounds.

Professor v. Bruns (*Berl. Klin. Woch.*, May 7, 1900, p. 405) recommends the use of hydrogen peroxide on infected wounds, and deprecates the use of antiseptic preparations which impair the vitality of tissues. His experiments were mostly conducted with a one-per-cent solution (measured by weight), applied either in form of irrigations or moist dressings. V. Bruns reports early and favorable results, the wounds cleaning up rapidly, while foul odors are corrected sometimes after the first dressing. He ascribes the efficiency of hydrogen per-

oxide to a specific action upon anaerobic organisms, while the rapidly generated foam effects a thorough and withal delicate cleansing of the traumatic surface.

Salol in Tapeworm.

Galli-Valerio (*Therap. Monatsh.*, March, 1900) reports upon a case of tapeworm in which, on the strength of its being decomposed by the intestinal juices into salicylic and carbolic acids, he successfully prescribed one gramme (15 grains) of salol. A fine specimen of *Bothriocephalus latus* was voided by the patient within a few hours after the salol was taken.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

The Reflex Origin of Urticaria.

In *Gaillard's Medical Journal* for April, 1900, David Walsh, M.D. (Edin.), physician to the Western Skin Hospital, London, England, writing on "Urticaria," says of the so-called reflex origin:

"To the peripheral and central nervous origin of urticaria most authorities add that of reflex action. Indeed, the urticaria of strong excitement may be described as a reflex of various external stimuli conveyed to the brain chiefly through the senses of sight and of hearing. While admitting the possibility or probability of a more extended field of reflex actions, it may nevertheless be pointed out that the instances commonly cited in proof of the reflex origin of urticaria may be quite as readily accounted for on the theory of a blood-borne irritant acting directly on the skin. Thus, uterine disease has often been quoted as a typical example of reflex urticarial irritation. In such a condition there is presumably, as a rule, plenty of toxic material capable of causing nettle-rash ready for absorption. The possibility for the entry of such material into the system is shown by the rashes that have sometimes followed vaginal or uterine douches of boracic acid, or by mercurial poisoning after similar applications of corrosive sublimate. The connection between the tapping of hydatid cysts and other surgical procedures may be readily explained by the theory of septic absorption, which also applies to the nettle-rash occasionally associated with gall-stones. Lastly, the concurrence of urticaria with intestinal worms, often quoted as an unquestionable example of reflex irritation, may be quite as reasonably attributed to the absorption in the circulation of toxic products

from the deranged intestinal tract. It may be, of course, that the blood-borne toxin produces the urticaria by its action on the nervous rather than on the cutaneous system, but on the other hand it is to be noted that ptomaine rashes are often scarlatiniform, which looks as if their irritant action were rather directly local upon the glands of the skin. On the whole, it would perhaps be safer to say of the so-called reflex urticarias that the exact method of causation in most cases requires further investigation."

Meningitic Herpes.

In the *British Journal of Dermatology* for March, 1900, Willmott Evans, M.D., F.R.C.S., surgeon to the skin department at the Royal Free Hospital, writes in part under the above heading as follows:

"In no inconsiderable number of cases a meningitis is the starting of the herpetic eruption, and this fact is important from the point of view both of diagnosis and prognosis.

"Herpes zoster may appear in epidemic cerebrospinal meningitis. It may affect either cranial or spinal nerves, and is generally very irregular in its distribution. Curiously, in different epidemics different groups of nerves seem to be especially liable to be affected, but on the whole areas corresponding to cranial nerves are more frequently involved than those connected with nerves of spinal origin.

"Herpes may occur in tuberculous meningitis, but in this disease it is decidedly rare. Certainly, more frequently is herpes noticed in the non-tuberculous basal meningitis of children, affecting branches of the fifth nerve. I have no explanation to offer of the difference of frequency in tuberculous and non-tuberculous forms, but as herpes appears more often in the non-tuberculous than in the tuberculous variety of basal meningitis, its occurrence may prove of some assistance in diagnosing between these two conditions; and, moreover, as the non-tuberculous form is apparently not so uniformly fatal as the tuberculous variety, the prognosis may be considered to be slightly more hopeful in cases in which herpes is present.

"Especially is it seen in epidemic cerebrospinal meningitis and non-tuberculous basal meningitis of children that there is a very great tendency for the eruption to be bilateral; which is easily understood, for the meningitis is not limited to one side of the brain or cord.

"Another characteristic of meningitic herpes is its tendency to be more persistent than the usual form. This is of course only seen in cases in which the patient survives more than a few days. Another point which needs to be borne in mind is that the herpes arising from

meningitis always corresponds to the distribution of a nerve-root, and not to the distribution of a nerve, except when they are practically identical, as in the dorsal region of the cord."

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Rupture of the Uterus—Management.

Adalbert v. Walla (*Centralblatt f. Gynäkol.*, May 12, 1900, p. 497) reports a case successfully treated by celiotomy and suture of the uterine wound under usual antiseptic precautions, and reviewing the management of similar cases he considers, first, the prophylactic, and secondly, the surgical treatment.

The prophylactic treatment he reduces to the rational management of labor (especially in cases with contracted pelves) leading to speedy and cautious delivery.

In cases of existing rupture of the uterus he considers, first, complete rupture; secondly, incomplete rupture; and in either case whether the fetus is already born or not.

The leading indication in rupture of the uterus is to produce the child in the shortest possible time. Von Walla thinks that celiotomy is plainly indicated only when the fetus has entirely passed within the abdominal cavity. If the penetration, however, is incomplete, he prefers extraction of the child *per vias naturales*, provided the existing circumstances promise an easy delivery without fear of increasing the existing tear, and relies on celiotomy where extraction of the fetus threatens to be difficult of execution and to entail further disruption of the uterine wall.

The treatment of uterine rupture after the fetus has been extracted *per vaginam* depends upon whether the rupture is complete or incomplete. In the latter case drainage *per vaginam* should be sufficient, while a complete rupture must be treated along surgical indications, either by suture after celiotomy, by supravaginal amputation of the womb, or even by abdominal or vaginal hysterectomy. The conservative plan (tampon, strapping of the abdomen, ice-bag) daily seems to lose its advocates and should be restricted to cases in which operative interference becomes either impossible on account of existing circumstances or even contraindicated (septic conditions, collapse, etc.).

Puerperal Inguinal Parametritis.

G. E. Herman (*British Medical Journal*, May 26, 1900) says that cellulitis after delivery is usually inguinal because during pregnancy the cellular tissue at the side of the uterus becomes looser, and the peritoneum is raised above the brim of the pelvis, so that at the end of pregnancy there is loose cellular tissue extending from the side of the uterus to the groin. Hence inflammation of pelvic cellular tissue after delivery tends to spread up to the groin. Apart from pregnancy the cellular tissue is not so loose, the peritoneum is not raised up toward the groin, and so cellulitis is seldom inguinal. Puerperal inguinal cellulitis is commoner than any other kind.

In the treatment of these cases the essential thing, says the writer, is to keep the patient at rest, and to maintain her strength by suitable food, while relieving her pain by narcotics if necessary. This is all that is essential. There is no drug that has been proved to have any influence on the absorption of pelvic cellulitis. We can please the patient, perhaps relieve her pain, and certainly do no harm, by applying fomentations made with sedative drugs to the part. It is possible that the fomentation may hasten the absorption, but we have no evidence of it. When suppuration has taken place, the important thing is to let out the pus as soon as possible. In some cases relief can be given by making an incision, and so relieving the tension even before pus is discovered. But in the inguinal region it is not prudent to do so on account of the nearness of the peritoneum; because if we have to search for pus, we may open the peritoneum, and then, if there is only a small quantity of infective pus, that may find its way into the peritoneum and set up peritonitis. In other parts than the inguinal region that practice can be carried out more safely. The important thing in the case of suppurating cellulitis is to open the abscess and let out the pus as soon as possible, and then keep the patient quiet while the abscess is healing. Few effects of surgical treatment are more striking than the rapid improvement in cases of parametritis when the pus has been let out.

Metrorrhagia: Treatment.

Ostermann (*Deutsche Med. Woch.*, No. 13) reports upon thirty cases of menorrhagia and metrorrhagia in which he has successfully used Labadie-Lagrave's mixture. Equal parts of antipyrin and salol are heated in test tube until they form a brown sticky substance, which is introduced into the previously cleaned uterine cavity by means of a cotton pledget and applicator. A single treatment has in most cases been sufficient to stop further bleeding.

MISCELLANEOUS.

THE LODGE DOCTOR.*

BY F. D. BULLARD, M.D., LOS ANGELES, CALIFORNIA.

When the thrifty-minded grocer
  Mixes with his sugar sand,
When the money-chasing merchant
  Fixes up a shoddy brand,
When the dollar-loving druggist
  Palms his own concoction off,
If they slyly seek to smother
  Qualms of conscience with a cough,
One excuse they're sure to offer,
  Though a cheap and shop-worn cry:
"Since the other fellow does it,
  To keep even so must I."

When the weaver interlaces
  Strands of cotton in the silk,
When the farmer intermingles
  Handy water in the milk,
When the sly and tricky jockey
  Sells a man a balky horse,
If perchance from guilty conscience
  Wells up in his heart remorse,
He will lull the new-born feeling
  Fast asleep and softly sigh:
"Since the other fellow does it,
  To keep even so must I."

When the steerer shows a sucker
  Where to play a quiet game,
When he cheats at playing poker
  Till the jay forgets his name,
When the bar man ladles whiskey
  To the poor besotted fools,
When the landlord rents his houses
  To impure and vice-soaked tools,
If the people raise objections,
  This lame answer bears the brunt:
"But the other fellow'll do it
  Just the same, sirs, if I don't."

Now the poor lodge-ridden doctor
  Pleads the same old weak excuse,
Though he knows that contract practice
  Leads to more and more abuse,
For it steals his colleague's patients,
  Makes himself to be a sneak,
On his back it puts this label:
  "Taken for two cents a week!"

* Read at the meeting of the Southern California Medical Society.

So whene'er he makes a visit
To a brother of the lodge,
He must stultify his conscience
With the "other fellow" dodge.

If to this you raise objection
He will peep the old reply:
"Since the other fellow does it,
To keep even so must I."
Or perchance the answer varies,
He'll exclaim in accents blunt:
"But the other fellow'll do it
Just the same, sir, if I don't."
So I quaff to his confusion,
I will drink a proper toast—
Though perhaps such bad reflections
You may think were but a roast—

Here's to that foolish M.D.
Who would for a dollar agree
To doctor a lodge
For a livelong year,
And never to dodge
Though the work be severe;
May he ever scamper
His patients to pamper
At all hours of the day and the night!
For hives and for phthisic
May he ever give physic
To people who call him for spite!

THE MEDICAL AGE

VOL. XVIII. DETROIT, JULY 10, 1900. No. 13.

ORIGINAL CONTRIBUTIONS.

SOME DEFORMITIES CORRECTED, ETC., ETC.

BY DANIEL LA FERTÉ, M.D., DETROIT, MICH.,

Professor of Anatomy and Orthopedic Surgery in the Detroit College of Medicine; Surgeon to the Children's Free Hospital and Harper Hospital, etc., etc.

The richness and abundance of the surgical material which is constantly coming under observation at the Children's Free Hospital prompts me to put together a few of the cases in the form of an article short enough I hope to be noticed by those who may come across it.

I have neither any great discovery nor anything startling to present, but I have before me notes and photographs of clinical cases which were under my care during the last few months, and which seem to me of sufficient importance to be put together in the form of a short article.

Case 1.—This case was a boy eleven years of age, who had inherited a specific disease which had caused necrosis of some of the spongy bones in the nasal fossæ. The triangular cartilage of the nose had become destroyed, as well as the greater portion of the cartilages in the left ala of the organ.

The majority of nasal defects can be very materially improved, but among those offering the least chance of improvement by operation are those where the cartilage has been destroyed. In those cases a lack of support for the flaps is a great hindrance to the success of an operation. Artificial support, in the shape of aluminum frames, etc., has been resorted to, but the results have not been as gratifying as

FIG. 1, CASE I.

FIG. 2, CASE I.

FIG. 3, CASE I.

FIG. 4, CASE I.

wished for. Still, no matter how bad the case may be, we are justified in operating as long as any chance for improvement is apparent, and it is astonishing how grateful those patients are after an operation, even if the cosmetic effect is very slight. In this case (Fig. 1) the dark line on the left side of the nose indicates a furrow, caused by the soft parts on that side being bent and folded in and thrown toward the ala of the opposite side, the cartilages of the left ala having been in great part destroyed. In order to obliterate this groove in the left wing of the organ two incisions were made

FIG. 5, CASE 2.

FIG. 6, CASE 2.

upon the inside, commencing above at a point corresponding to the upper extremity of the furrow, one running downward and forward to the lower border of the ala at a point corresponding to the anterior border of the groove, the other to a similar point corresponding to the posterior part of the groove. These incisions were carried through the tissues as far as the inner surface of the skin and enclosed a triangular piece of thickened mucous membrane. This was dissected from the under surface of the skin, the apex remaining attached above. The edges were rolled upward toward one another and fastened to the under surface of the skin by means of button sutures. After healing had taken place this roll of mucous membrane and connective tissue served as a sort of artificial cartilage for the ala and

kept it up and supported it in its place. This left his appearance as seen in Fig. 2.

The columna also was absent in this patient (Fig. 3). To remedy this, a narrow vertical strip was taken from the median portion of the upper lip. This strip was made about one-fourth of an inch in width and included the whole thickness of the lip. The frenum and mucous membrane of this little flap must be freed from their attachment to the upper jaw. This subject being a boy, the skin was dissected from the flap to remove the hair follicles and guard against the future growth of hair toward the cavity of the nose, before it was sutured in place.

Fig. 7, Case 3.

After this last operation considerable trouble was experienced from contraction of the flap and cicatrix in the lip, which necessitated a secondary operation. The nostrils were this time kept dilated during the healing process, by means of Billings's septum splints. The result is shown in Fig. 4.

Case 2. — The history obtained in this case is quite vague. The parents attributed her condition to an injury (Fig. 5). They stated that when the girl was quite young a young boy fell out of a window and landed on the child's head as she lay on the grass beneath.

When she came to me for examination, at twelve years of age, it was noticed that she wore the shoe on her right foot in a peculiar manner; the shoe was put on so that the dorsum of the foot acted as the sole and the heel protruded in the lace of the shoe. In walking the toes turned directly backward. Her left foot was inclined to turn on the outer border, and the tendo Achillis was so contracted that the foot could not be brought beyond the right angle with the leg.

Upon further examination it was found that the patient could flex and extend both thigh and leg upon the right side, but upon the left side she could flex and extend neither thigh, leg, nor foot. This con-

FIG. 8, CASE 3.

dition of the left lower thigh, together with the deformed right foot, made her gait very swinging, shuffling, and awkward.

It is not always possible to accomplish a great deal in the way of cure in cases of infantile paralyses, yet enough improvement can frequently be obtained to warrant a trial.

In this case the tendo Achillis of the left side was cut and the foot brought around in a slightly overcorrected position. It is not advisable to overcorrect too much in these cases, as it sometimes happens that the different sets of muscles are affected with spasm and overcorrection might remain permanent. On the right side the tendo Achillis was first cut, then the peroneus longus and brevis, as the foot was drawn toward that side by their contraction. In the sole of the foot the flexor brevis digitorum and long and short plantar ligaments were severed; in fact, everything that offered resistance was cut until the foot could be brought to its normal position. Her condition at present is shown in Fig. 6.

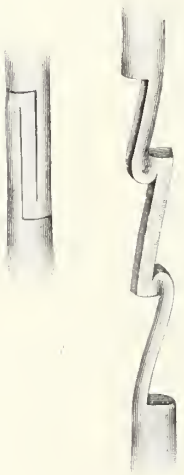


FIG. 9, CASE 3.

Case 3.—Intra-uterine fracture—pseudarthrosis. This case is perhaps the most interesting of the series that I have to present, both from its clinical and pathological standpoint. The result obtained also is quite flattering. This I glean from a discussion before the British Medical Association at Portsmouth, England, in August, 1899. None of the gentlemen present who took part in that discussion could recall a case where pseudarthrosis of the tibia and fibula in the child had recovered after operation, no matter what the nature of that operation. Fig. 7 represents the case of a child seventeen months of age, the case being referred to me by Dr. M. J. Spranger, of this city, and later put under my charge by Dr. F. B. Galbraith, of Pontiac. It will be noticed in the figure that the leg is bent at an acute angle a little above the ankle. The skiagraph (Fig. 8) shows a fracture with the bones at an acute angle. On account of the position of the foot, the child had never been able to stand or walk.

That ununited fractures of the tibia and fibula in the child are difficult to heal may be gathered also from the fact that in a work published by Sir James Paget in 1891, entitled "Studies from Old Case Books," there are recorded only three cases of ununited fracture of the tibia and fibula in infancy which were treated by all recognized methods, and all three eventually had to undergo amputation. Why union does not occur it is hard to explain; there may be an atrophic

condition of the bone at the seat of the fracture, or there may be trouble in the spinal cord interfering with innervation of the parts. In some cases, as in the present one, the fracture occurs *in utero*.

On October 12,. 1899, I operated by first elongating the tendo Achillis by the method represented in Fig. 9. Then I cut down, intending to wire the ends of the bones. I found the fibula united with firm bony callus, which I chiseled out. The fragments of the tibia were loosely united. I was able to straighten the leg by using a moderate amount of force, and judging from the rather healthy appearance of that callus I did not think best to remove it, but hoped that by keeping the leg in plaster of Paris I might get union. In this, however, I was disappointed.

FIG. 10, CASE 3.

On the 22d of January, 1900, I again cut down, and found union in the fibula much firmer than in the tibia. I cleaned out all osseo-fibrous material from the seat of the fracture in the latter bone and resected something over half an inch from each fragment. These broken ends were found not atrophied, but rather enlarged and spongy. I drilled through each fragment and passed in a piece of silver wire. A piece of live rabbit's bone long enough to fill the gap was inserted, and the wire was tied and twisted over it; then the periosteum was sewed over the plug of bone and silver wire. The leg was then put in a plaster-of-Paris cast, which was taken off February 17, when we found that there had been no suppuration and union was evidently taking place. The cast was reapplied the same day, after which date it was occasionally removed and reapplied until March 15, when union was so firm that the child was allowed to begin to stand around chairs and learn to walk (Fig. 10).

FIG. 11, CASE 3.

The leg is one inch shorter than its fellow, which may be due partly to the resection and partly to the length of time that the foot was held in its abnormal position. Fig. 11 shows skiagraph of this case taken April 30, 1900. Drs. W. C. Martin, R. S. Gurney, and I. M. Campbell examined the case with me and pronounced the union firm. I felt anxious to get the opinion of others because of the discouraging reports which we get on all sides in the treatment of similar cases.

My own experience is limited to one other case on which I operated last August (1899) in a similar manner, which proved a failure. I purpose to operate again on this case very shortly, and shall report it whether it proves to be a success or a failure.

(*To be continued.*)

ACUTE OTITIS MEDIA.*

BY NORTON L. WILSON, M.D., ELIZABETH, N. J.

The subject of this paper is one which has received repeated consideration and formed a theme of frequent discussion.

An apology may be due to you because once again your attention is called to the subject, but it is one which has to do with one of the most important diseases of the ear. It is needless to assure you that if we are able to abort or cut short by treatment acute inflammations of the middle ear, we will have but few chronic cases with their many and serious complications to treat.

In presenting a subject seemingly threadbare, I do so because of the wide differences of opinion as to the proper method of its treatment. In such presentation I wish, in the first place, to impress upon the members of the profession that we are, in a large sense, educators of the people. Upon us rests the obligation of instructing the masses as to the proper care not only of their bodies in general, but of their ears as forming a part of such bodies. We ought, therefore, so far as is possible, to agree in our notions of proper methods of treatment of the disease under consideration before we undertake to instruct the people in such methods. I may safely say that there is a general agreement in the profession as to the etiology of the disease, but there exists a difference of opinion in regard to the proper methods of treatment to be pursued.

I have purposely entitled this paper "Acute Otitis Media." Such inflammation may be of a catarrhal or purulent nature, and under this head I include the serous variety. The catarrhal is more fre-

* Read before the State Medical Society of New Jersey.

quent than the purulent. The latter form of the disease more frequently occurs than it would otherwise if we properly treated the catarrhal cases. If the middle ear should be regarded as one of the accessory sinuses to the nose, which in our opinion it is, just as the antrum of Highmore or the frontal sinuses are so considered, we would, in my judgment, see the important relations existing between the nose and the ear. We all know that acute inflammation of the nasal chambers may or may not extend into these sinuses. It is equally well known that an extension of the process is much more likely to involve the middle ear than the other sinuses, although simple salpingitis may exist without further extension of the inflammatory process into the middle ear. The causes of acute catarrhal otitis media may be the extension of inflammatory products from the external ear, the introduction of fluids in the middle ear through the Eustachian tube while bathing, or from the use of the nasal douche, acute coryza or violent efforts at clearing the nostril, or any other abnormal condition of the upper air-passages, particularly the presence of an enlargement of lymphoid tissue in the vault of the pharynx. Climatic influence must also be considered an etiological factor.

It has already been suggested that if the acute catarrhal inflammations were properly treated, there would be less purulent inflammations to treat. It is not my wish to have you understand that all purulent inflammations result from neglected catarrhal inflammations. Some cases are purulent from the beginning, but not a few catarrhal inflammations are converted into purulent cases by infection, either through the Eustachian tube or the external canal after rupture of the drum membrane has taken place. The term "acute catarrhal otitis media" is applied to an active inflammatory condition within the middle ear, resulting in an increase in the normal secretion. It is certain that venous stasis plays an important part in the causation, and in this condition the mucous membrane is particularly susceptible to the absorption of bacteria. Why, in certain instances, this inflammatory process results in the formation of mucous secretion, and in others in the formation of pus, is explained by Dench. He says: "The upper part of the cavity contains a large amount of connective tissue. We should expect infection in this region to be followed by inflammation of the lining mucous membrane." If, therefore, the infection is slight and only occupies the lower part of the tympanum, a catarrhal inflammation is the result. If, on the other hand, the infection extends to the upper part of the middle ear, a suppurative process ensues. This is always the case in infection from the exanthemata, typhus and typhoid fevers, pneumonia, diphtheria, influenza, and operations in the nasal and postnasal spaces.

It has been rather my purpose to call your attention to these varieties of inflammation than to point out the necessity for diagnosing them. The subject under discussion was suggested by a recent case coming under my observation. The parents of a child two years of age, after two or three restless, feverish, and wakeful nights, called upon a physician, fearing that the child had sore throat; they had noticed that it occasionally put its hands to its throat. The child's throat was examined and found not to be inflamed. The fever could not be accounted for. A homeopathic physician was called in, and he failed to satisfy the parents. The child's condition continued about ten days, when the mother discovered, one morning, a purulent discharge from the ear. This solved the mystery, and the child was brought to my office for treatment. It was undoubtedly in the beginning a catarrhal otitis media; it became purulent, and could no doubt have been averted if treated earlier. I cite this case to show you how easy it is to overlook an earache in young children. It behooves us, however, to examine the nose, throat, and ear in all cases of fever where the cause is not clear.

The symptoms of acute inflammation of the middle ear are so well known as to require no extended explanation. I wish to say, however, that they vary considerably, according to the age of the patient. There has come under my observation a case of otitis media catarrhalis acuta in the adult, so severe as to rupture the membrana tympani, and yet the patient positively declared he had no pain. Cases of this character are rare, except they be due to tuberculosis. Children are more apt to have an elevation of temperature than adults.

The part of this subject which most concerns the general practitioner is the diagnosis and treatment. If the canal and membrana tympani are inspected in the early stages with a speculum and mirror, there will be found a distinct hyperemic condition of the drum membrane, most marked in the region of the handle of the malleus, with the redness shading off gradually into the normal color of the part. If the inflammatory process does not subside, the whole drum membrane, including the upper part known as Shrapnell's membrane, will present a deep red color. The luster is wanting, and the landmarks may be obscure on account of edema. At this period effusion has usually taken place, the result being to force the drum membrane outward into the canal. As has already been stated, this simple catarrhal inflammation may be converted by infection into a purulent process, with its accompanying necrosis. Recognition of this condition in its early stages is of the utmost importance, since the disease is always a serious one, being dangerous not only to the function of the organ, but often to life itself. Particular attention should be given to an inspection of those parts lying above the short process

of the malleus, whenever severe pain in the ear is complained of. In the very early stages of the purulent variety, the upper portion of the membrana tympani alone is the only part which presents the slightest departure from the normal appearance. Inspection will reveal the fact that this portion of the membrane is distinctly congested, presenting a deep, dull-red color, characteristic of a high degree of venous engorgement of the underlying structure. This hyperemia does not extend below the posterior fold.

It will be observed that there is a marked difference in the appearance during the early stages between the catarrhal and purulent inflammations of the middle ear. It is in these early stages that the family doctor sees the case, and it is important that prompt measures should be taken to abort the attack. Opinions widely differ as to the proper treatment of this disease, and for that reason I have presumed to present the subject for your consideration, and give my own experience, rather than quote the many good authorities on this subject. In my own practice I put the patient to bed, and administer calomel in small doses, from one-sixth to one-half grain every half-hour, until copious evacuations of the bowels are obtained. At the same time I have applied two or three leeches in front of the tragus, and in order to relieve the pain have irrigated the ear with hot water by means of a fountain syringe, with a return-flow bulb attached to the end of the tubing fitting snugly into the meatus, and allowing the stream of hot water to gently run up against the membrana tympani and to flow out through the outlet without removing the tip. This method of treatment does not commend itself to many of the profession, who insist that moist heat is objectionable, inasmuch as it has a tendency to favor venous congestion, soften the tissues, and hasten local necrosis, and does not aid the abortion of the process, which is the object of treatment. This method of treatment was discussed by the writer in a paper read before the Union County District Medical Society, in April, 1895, and since then in the many cases treated I have seldom failed to promptly relieve pain. My experience leads me to believe that it does not favor venous congestion, but, on the contrary, dilates the vessels and relieves the stasis.

On a very recent occasion two children came to me with earache, and during their treatment were under my constant observation. Calomel was administered and heat applied to the drumhead in the manner above described. In a very short time they had fallen into a peaceful slumber. On the following day I was called to see the child of a professional brother, and the same expedient was resorted to with the same happy result. They cannot fail to be emphatic who have witnessed one of these little sufferers one moment piteously cry-

ing and appealing to our deepest sympathies, and the next experiencing a grateful relief from the use of the hot water, soon to be followed by a peaceful and painless sleep.

The treatment which I have indicated is applicable to both the catarrhal and purulent forms of acute otitis media.

Physicians are educators. As such it is their duty to instruct the family what to do and what not to do. I sometimes feel that we have been negligent in our duty when I see an ear gummed up with goose grease, mullein oil, sweet oil, etc., etc., and repeated efforts are necessary to clean the canal in order to inspect the drumhead. A resort to these improper methods of treatment is a popular one, but they have no therapeutic value, and so besmear the membrana tympani as to render its recognition difficult. No objection can be urged against the use of vapor of chloroform, solutions of carbolic acid, morphine, atropine, or cocaine, but in my practice I have been able to dispense with the use of drops of any kind since using the continuous stream of hot water.

The treatment by continuous hot irrigations has been mentioned at some length, because it is in direct opposition to the teaching of many excellent otologists, and because in my own experience I have found that it affords relief from pain more promptly than any other expedient. In resorting to this method of treatment I never neglect the toilet of the nose, using Dobell's solution or some of the so-called antiseptic solutions as a mild spray, or washing out the nostril by dropping this solution from a medicine dropper. Older persons will readily sniff it through the nostril from the palm of the hand. The douche is never used where large quantities of fluid are forced into the nasal chamber, for fear of its entrance into the Eustachian tube. If the nasal mucous membrane is much swollen, with closure of the Eustachian tube, I drop into the nose a watery solution of suprarenal gland. After washing off the mucous membrane, a very soothing application is a spray of menthol and camphor dissolved in some of the coal-tar oils. I consider this step in the treatment of acute otitis media just as essential as any of the others. As to the internal treatment, I have already spoken of calomel, because I believe that to be of considerable value. I may add that I sometimes give aconite, acetanilid, or phenacetine, but am loath to administer opiates, especially until after the bowels have been freely evacuated. This is the conservative treatment of acute inflammations of the middle ear, whether they be of a catarrhal or purulent nature, and this treatment is preferred until positive indications for paracentesis of the drum membrane present themselves.

It might be added that in some instances children are Politzer-

ized by using warm air where no secretion in the nose is observed and the Eustachian tube is closed. Some otologists, for whom the greatest respect is entertained, advise early incision of the membrana tympani, and yet by the conservative method outlined above rupture of the drum membrane has been averted. It must be admitted that every case will not yield to this treatment, but we should give the patient the benefit of our experience before operation, unless by so doing we endanger his life. The majority of general surgeons try rest and ice in catarrhal appendicitis before using the knife, and as we know with good results. The treatment indicated, if necessary, is continued from twenty-four to thirty-six hours. If at the end of that time the membrane is bulging or the pain persistent, I do not hesitate to incise the membrana tympani. Before doing this I attempt to anesthetize the drum membrane by using a warm six-per-cent solution of cocaine hydrochlorate. In some cases this solution relieves pain, while in others it fails. This is probably due to the fact that in some cases the epithelium is intact. I then attempt to sterilize the canal by filling it with a warm solution of mercuric bichloride (one to three thousand). If the membrane is bulging in the upper part, or if the otitis accompanies one of the exanthemata, we may confidently expect to find pus. For incising the membrane a cataract knife is used, and is found to be more useful than the ordinary spear-shaped blade made for that purpose. After gently pushing the knife through the portion of the membrane which is bulging, an effort is made to divide the swollen tissue in the superior posterior portion of the middle ear. This causes free bleeding, and the hemorrhage is encouraged by irrigation with warm sterilized water, if the discharge is purulent. If the discharge is of a serous character, I omit lacerating the membrane within the middle ear and do not irrigate it, but mop it out with cotton applied on a probe. In other words, the probability of converting a serous discharge into one of a purulent character is avoided as much as possible. The catarrhal discharge is daily mopped out until it diminishes, when the membrane is gently dusted with boracic acid by carefully blowing in the powder. These cases, as a rule, terminate satisfactorily within a week, while those of purulent discharge are irrigated four or five times a day with boiled water, to which may be added a little table salt or a mild solution of boracic acid. As a rule, cases of the latter kind will terminate satisfactorily in about two or three weeks.

In conclusion, I would fix in your minds that acute otitis media, whether it be of a catarrhal or purulent nature, is not a trifling disease, and the surgeon who fails to properly appreciate this fact falls short of his professional calling.

THROAT COUGHS.*

BY S. G. DABNEY, M.D.,

Clinical Lecturer on Diseases of the Ear, Eye, Nose, and Throat in the Hospital College of Medicine, Louisville, Kentucky.

In my experience the most frequent causes of cough found in the throat are: (1) elongated uvula; (2) granular pharyngitis; (3) laryngitis; (4) enlarged lingual tonsil; (5) hypertrophy or chronic inflammation of the faucial tonsils; (6) adenoid growths.

Very frequently two or more of these conditions coexist. Unless accompanied by a bronchitis, cough from the throat usually produces but little expectoration.

1. Elongated uvula is the most commonly recognized cause of throat cough. The average length of the uvula in the adult is said to be three-eighths of an inch. Its elongation may be either acute or chronic. The former is generally a complication of other diseases; such as acute pharyngitis and tonsillitis.

Treatment must be chiefly directed to these inflammations. Gargling seems to be going out of fashion, and some high authorities regard it as useless; but I have found a simple astringent gargle of tannin, glycerin, and water of great value in these acute inflammations of the uvula. Where there is much edema the old-established treatment is puncturing in many places. This is painless, if a little four-per-cent solution of cocaine is first applied with some absorbent cotton on a probe, and is usually quite effective.

Chronic elongation of the uvula without inflammation is far more common. Sometimes the muscle of the uvula is involved and the parts are thickened as well as elongated. More frequently we find the so-called "stripped uvula," in which the mucous membrane hangs as an elongated tip from its lower end. In either condition medical measures are unsatisfactory. Clipping off the excessive portion is the best treatment. This can be done with almost no pain by the application of cocaine as above described.

I have tried several rather complicated and costly uvulatomes, but have long since discarded them for forceps and scissors. In the little operation two things should be remembered: first, not to pull with the forceps, for by so doing we cut off too much mucous membrane and leave a bare stump which is slow and painful in healing; secondly, to hold the tip slightly forward and direct the cut surface upward and backward. Thus it is not so much irritated by the passage of food. If only the mucous membrane at the tip has been cut there is usually

*Read before the Louisville Clinical Society.

but little after-pain, but where the body of the uvula has been cut there is often decided pain in swallowing for some days, and occasionally an acute sore throat. The danger of hemorrhage is so remote that it need not be considered. Of course, only the redundant portion should be removed.

Theoretically we might expect disturbance in swallowing or in speech to result where the entire uvula has been amputated. Such consequences may occur occasionally, but I have seen several cases in which this error or accident has been made years before and caused no trouble.

Elongated uvula is sometimes the result and sometimes the cause of irritation elsewhere in the throat. Among its symptoms, in addition to cough, I may mention nausea in rare instances. I have seen the morning sickness usually observed in pregnancy relieved by clipping the uvula. The explanation is probably that in the recumbent position at night the uvula did not touch the tongue, but on arising this organ was irritated by it until it became used to its presence.

2. In granular or follicular pharyngitis we see smaller elevations of varying hue dotted over the postpharyngeal wall. There is often a general hyperemia with enlarged vessels. These little masses were long regarded as muciparous glandules, enlarged and obstructed. They are really adenoid or lymph nodules, and hence are often found attending adenoid growths, both depending on the so-called lymphatic diathesis. Besides cough this condition often causes a weak voice and vague neuralgic pains about the throat. By far the best treatment is to burn through the little nodules with an electrocautery tip. Three or four may be so treated at a sitting. There is usually little or no after-pain or reaction.

3. Laryngitis. This subject is of course too large to do more than slightly touch upon it. I speak of the variety known as catarrhal, and do not include syphilis, tuberculosis, or cancer. The local appearance is usually a diffused hyperemia, and in long-standing cases some thickening and irregularity of the vocal cords, with occasionally minute elevations, known as singers' nodules, along their edge.

In acute laryngitis avoidance of exposure, rest for the voice, aperients, and other general medication as indicated, with inhalation of tincture benzoin (one drachm to one pint of hot water), is the old and valuable treatment. In addition to these measures cure is hastened and comfort promoted by spraying the nose and throat with camphor and menthol in oil of albolene. To allay the cough heroin has given me the best results, in several cases succeeding where codeine had failed. Where there is much bronchitis I usually direct such patients to their family physician, but when they are office

patients, in whom the laryngeal inflammation is the chief factor, I combine terpin hydrate and codeine. The latter I generally prescribe in one-twelfth-grain doses every two hours, but occasionally in decidedly larger quantities.

In chronic laryngitis the proper use of the voice and attention to the nose and nasopharynx are of great importance. Nasal obstruction is a common cause. Here and in the later stages of the acute variety a spray of five grains to the ounce of nitrate of silver directed well into the larynx is valuable. Much stronger solutions are recommended, but my experience favors this strength. I have not yet used protargol for this purpose, though in certain other diseases I have found it much better than nitrate of silver.

4. Enlarged lingual tonsil is found almost exclusively in adults. In this it differs from the other lymphoid structures in the throat—the faucial tonsils and adenoids. The lingual tonsil is found at the base of the tongue and pressing upon the epiglottis. When enlarged it often irritates and catches the edge of the latter, and thus produces cough. Besides cough its most common symptoms are, first, a tendency to swallow when there is nothing to be swallowed, called "empty swallowing," and secondly, impaired voice with or without laryngitis.

This structure is occasionally subject to acute inflammation, but as other symptoms are then far more prominent than cough I do not consider the affection. Enlargement of the lingual tonsil is best treated by abscission or by the electrocautery. I usually apply the latter. Several sittings are required, but the relief is often great. The instrument must generally be directed with the laryngoscope.

5. The tonsils, either when hypertrophied or when atrophied and the subject of chronic lacunar disease, may cause cough. In the former case we often find a hypertrophy extending downward toward the tongue. Most of the symptoms commonly attributed to enlarged tonsils are due in greater measure to adenoid growths.

The treatment consists in removing that portion of the tonsil which projects beyond the pillars of the fauces, and especially its lower tip. It is this part which is often left behind by not carrying the instrument well around it.

I operate with the tonsillotome. The electrocautery snare seems to me objectionable, both from the danger of secondary hemorrhage and from the greater sore throat it produces. The extract of the suprarenal gland is applied previous to operation by some surgeons, but I believe is here dangerous, because it increases the danger of secondary hemorrhage. In nasal work I use it daily. Hard tonsils in adults are sometimes best removed with the cold wire snare.

Chronic lacunar disease is still more often a cause of cough. The tonsil is small and hidden by the pillars until they are pulled aside. The crypts contain a cheesy substance of very bad odor. Frequently the anterior pillar is adherent to the tonsil. The treatment consists in freely slitting open the lucunæ and burning their sacs with the electrocautery, and in freeing the adherent pillars. In some cases it is well to remove the shrunken tonsil, when practicable, with the punch forceps, but in my hands this instrument has not been satisfactory.

6. Adenoid growths are by far the most common throat disease in children. In this connection I consider only one, and not the most common, of their symptoms, viz., cough. This is most often observed at night. It is due sometimes to mouth-breathing caused by the obstructed nose and producing a dryness of the throat, sometimes to the formation of a secretion which trickles down the pharyngeal wall, and possibly sometimes to reflex impressions originating in the adenoid. Both here and in enlarged tonsils some benefit may be obtained by local cleansing combined with iodide of iron and cod-liver oil internally, and with attention to diet and other hygienic measures. But the proper treatment is surgical and consists in thorough removal of the adenoid.

In India, China, Japan, and adjacent countries are about 400,000,000 people, strong, active, and long-lived, who eat no meat. The Turkish porter on a daily ration of rice and dates will jog along with bent back under a load that would crush a western man. Darwin tells us that the Andean natives do a day's work of 400 foot tons, nearly twice the work of an ordinary laborer, on a diet of bananas.

Dr. C. Bauer, Professor Haab's clinical assistant at Zurich, has written a report upon trachoma, which is very rare in Switzerland. Out of 65,000 ophthalmic cases registered from 1862 to 1899 he could only find 153 cases. As 137 of these were foreigners, and those mostly Italians, there were only sixteen cases of Swiss patients, some of whom had imported the illness. Owing to the influx of Italian workmen in the last few years to Zurich, there were annually some twenty cases under treatment, as the 9000 Italian workmen formed a good percentage of the inhabitants of the town of Zurich, the population of which town is 165,000. The fact that these men congregate together and mix very little with the German-Swiss population explains why the cases of trachoma among the inhabitants have not increased. Prophylactic measures are, however, to be put into action to prevent any possible spread of this dangerous affection.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

ON SOME USES OF CATGUT.

All medical men are familiar with the genus cat, and a few have a passing acquaintance with the "kitty;" but the delicate and prudish maid who said the "pussy intestines" of her tennis racquet were relaxed had largely missed her guess. It is the gentle sheep which has from time immemorial yielded from his ruminant bowel those strands which have done so much for the development of musical, surgical, and piscatorial history. The sheep and his companion, the lusty billy-goat, furnish that marvelously fine translucent material for the stringing of the maestro's violin and the maiden's racquet, the ligation of arteries, and those fine "mist-colored" leaders which delight the gentle angler's heart. Not the fat Shropshire or Southdown whose "saddle" delights the gourmet's palate, but the lean and ill-fed sheep is said to yield the toughest gut. And the sheep that graze upon the Neapolitan hills, together with those gaunt lactiferous nanny-goats, the ambulating milk-cans of Naples, furnish the strings of finest texture and greatest durability.

The Italian violin makers no doubt brought about the perfection which has been attained in the preparation of this material; and bound to the frame of the old Cremona, the vibrations of these cords of gut, under the hand of the virtuoso, have thrilled the hearts of thousands. But did Remenyi on his old Stradivarius ever evoke a strain more thrilling and inspiring than the strain of a two-pound trout on the slender, almost invisible, leader? These strong, fibrous strands of humble origin have helped to fame all our illustrious Ole Bulls, have secured severed arteries and assured the glory of our Nicholas Senns, and to all our modern Izaak Waltons have brought untold success in the gentle art of angling.

Some few doctors there be who can please themselves and rejoice,

perchance, their friends on the catgut stretched over a violin body, "scraping the hair of the horse over the gut of the cat;" we can all (some better than others) tie a ligature; but blessed, just now, are those favored medical men who can cast a bit of gut from the shady banks of some favorite pool or stream and lure to flies and hook the speckled beauties in the cool depths.

This is the time to exchange medical literature for the rich lore of angling. Van Dyke's "Fisherman's Luck," Kingsley's "Chalk Stream Studies," Walton's "Complete Angler"—these and the like are the works of reference that should now occupy the fagged doctor's attention. This is the instructive recreation that will fit him to cope with next autumn's cares and ills. Let him "hang up the fiddle and the bow," bury the sutures or store them in his favorite sterilizing solution, and fare forth with what should now be the leading gut, the gut leader.

Summer is here.

Let us fish.

EDITORIAL NOTES.

An Opinion on the Founder of Christian Science.

In an article in the *Johns Hopkins Hospital Bulletin*, Dr. H. T. Marshall thus summarizes the character of Mrs. Eddy:

"We see that the head of the movement is a woman, who is considered by some to be the victim of a form of insanity known as paranoia; a woman whom many more consider simply an imposter, growing rich at the expense of her deluded followers; a woman evolved from homeopathy, who claims the powers of Divinity.

"We see that this woman has built up a system showing the utmost crudeness of construction, full of inconsistencies and self-contradictions; displaying, at every turn, the author's ignorance of the meanings of words, her confusion of ideas, and complete inability to reason logically. We see the head of this system guilty of horrible blasphemy. We see her denouncing as false the findings of all human experience, and we see her arrogantly vaunting herself as the only human being with true knowledge, and on every page of her book boasting of her superior wisdom. We see the members of this school making the most extravagant claims of their power over disease; we see them, in the name of religion, stand passive at the bedside of suffering infancy; we see them, in the name of religion, attempting to undo all that has been accomplished by millions of earnest workers and thinkers to better the conditions of human life."

ITEMS AND NOTES.

CHOLERA threatens to be severe in Bombay this summer.

A WELL-EQUIPPED and endowed institute of bacteriology has been erected in Ceylon.

YELLOW FEVER is reported to be prevalent in all parts of the isthmus of Tehuantepec in Mexico.

COLORED globes in drug-store windows were first displayed by the Moorish druggists of Arabia and Spain.

DR. ROSWELL PARK, Buffalo, New York, has been appointed chief medical director of the Pan-American Exposition.

THE death of Professor Tommasi-Crudeli, the celebrated pathologist, is reported to have taken place in Rome on May 30.

THE Berlin authorities have instituted a three weeks' course in the Deaf and Dumb Asylum, for physicians engaged in work among the deaf and dumb.

THE invalided soldiers sent home from South Africa will be paid and medically treated until they are discharged, their families receiving the ordinary allowances.

PROFESSOR PORRO, Senator of the Kingdom of Italy, as to whose state of health very grave reports recently appeared in the Italian press, has now completely recovered.

AN epidemic of typhoid fever at Forestville, Connecticut, has resulted thus far in thirty five cases, and six deaths have been successfully traced to a contaminated water-supply.

THE St. Petersburg Military Academy has received a considerable grant from the Minister of Finance in order to establish a clinic for persons suffering from the effects of alcoholism.

A DAY resort for pulmonary invalids has been opened on the outskirts of Berlin, with facilities for reclining, for warming lunches, and obtaining inexpensive wholesome refreshments.

THE committee charged with the organization of a collective investigation of cancer in Germany is now fully formed. Professors von Leyden and Kirchner are the presidents, and Dr. George Meyer is the secretary.

Dr. L. O. Howard, in a paper on "Structural and Other Differences Between the Several Mosquitoes of North America," gives as a mark of distinction that while the Culex has a high-pitched note, that of the Anopheles is about four tones lower.

The second meeting of the Latin-American Scientific Congress will be held at Montevideo from March 20 to March 31, 1901. The work of the Congress will be divided among nine sections, of which one (the sixth) is assigned to the medical sciences.

The Portuguese Geographical Society has decided to send this summer an expedition to Serra Nogueira in the Province of Tras-os-Montes. The expedition includes a medical section, which will study the medical hydrology of the district and local diseases.

According to the will of the late Henry M. Curry, of Pittsburg, Pa., the following bequests are made: To the Pittsburg Hospital for Children, $20,000; Homeopathic Hospital, $10,000; Western Pennsylvania Hospital, $25,000; Kingsley House, $5000; Western University of Pennsylvania, $10,000.

Professor Pagliani, president of the Piedmontese Society of Hygiene, has proposed the establishment of a propaganda for the prevention of malaria in the sub-Alpine region. A meeting was held at Vercelli, at which Professor Bizzozero, Professor Bozzolo, and others were present.

Snake-bite in India, on the recommendation of Major Lyons, is to be treated as follows: Bind a string or handkerchief as close as possible to the wound on the proximal side. Wash with a fresh solution of hypochlorite of lime diluted to 1:60. Inject a dose of antivenomous serum into the subcutaneous cellular tissue of the flank.

The Ainos in Japan are a white-skinned race. They are hairy, and from the circumstance are called "dogs" by the Japanese, who regard themselves as much superior. The Ainos are nomadic and are hunters. It is said they do not eat fish, whilst the Japanese are very fond of it. They have no leprosy, which in some districts of Japan is very prevalent.

An aeronaut was recently poisoned by hydrogen arsenide which escaped from the balloon. This shows the necessity of purifying the hydrogen arsenide used for balloon purposes. The balloon was filled in the ordinary way, and nothing peculiar in the odor of the gas was noticed. A few hours afterwards persons who had assisted in the operation were taken seriously ill.

Some Christian scientists in New York asked to be allowed to treat "Old Tom," a sick and wicked elephant in the Central Park Zoo. When told that "Old Tom" would give them massage if they should enter his cage, the scientists replied, with great presence of mind, that they would give "Old Tom" absent treatment. They must have done so, for the elephant is better.

Dr. A. Philip writes to *The Lancet* of May 26 referring to a mode of quenching thirst by keeping a small round pebble in the mouth. Thirst disappears and perspiration is diminished. Dr. Philip states that he has gone as long as eight hours and a half in a broiling sun with nothing but dry biscuits and cheese for a lunch, and at the end of that time was not particularly thirsty.

The General Medical Association of Roumania, which was founded three years ago with the object of consolidating the strength and promoting the interests of the profession, has recently been recognized as of public utility by a unanimous vote of the Roumanian Chamber. The association holds a congress twice a year for the discussion of scientific questions and medical politics.

The University of Odessa has hitherto lacked a medical faculty. The necessary buildings have been already partly erected, and a commencement will be made next session. There will be at first seven clinics with 195 beds, fourteen ordinary and nine extraordinary professors, and nine prosectors and six assistant prosectors. The first dean of the medical faculty will be Professor Podvysotski.

Mrs. Ruiz, wife of Dr. Ricardo Ruiz, the American citizen who was butchered by Spaniards in Cuba in 1897, is soon to receive $5000 from the United States government, which took over all the claims against Spain at the signing of the peace treaty. When General Lee made his report on this case our goverment placed the figures at $50,000, and stoutly maintained that that was little enough for Spain to pay.

In a report on thunder-storms recently issued by the United States Weather Bureau, it is stated that the number of deaths from lightning in the country, reported to the bureau during the year 1899, was 562. The total number of those struck was 1382, 820 of whom survived the stroke. It is believed that this record is fairly complete, though doubtless some cases occurred of which the bureau had no cognizance.

In the course of a discussion at a meeting of the Royal Academy of Medicine of Ireland (February, 1899), Dr. Myles is reported to

have said: "There was a small lake in New Zealand around which, even at the time when Captain Cook discovered the islands, leprosy prevailed. The natives attributed the disease to their eating a peculiar kind of fish which was only to be found in that lake. The disease never spread beyond the borders of the lake."

At a recent meeting of the Board of Trustees of the University of Pennsylvania, Dr. J. William White, formerly professor of clinical surgery, was elected a Barton professor of surgery and clinical surgery; Dr. Edward Martin, formerly professor of genito-urinary surgery, was elected professor of clinical surgery; and Dr. Charles Harrison Frazier, formerly instructor in surgery, was elected professor of clinical surgery.

On May 25 the degree of doctor of medicine was conferred by the Carolina Institute of Stockholm on Fraulein Anna Stecksen. This is said to be the first time that a woman has been admitted to the degree in Sweden. The subject of the lady's dissertation was "Studies of Curtis's Blastomycetes from the Point of View of the Etiology of Tumors." Fraulein Stecksen pursued her studies partly in the Pasteur Institute of Paris under Dr. Roux, and partly in the bacteriological laboratory of the Carolina Institute at Stockholm.

A society has been formed in Moscow, says the *Medical Record*, to collect funds for the establishment of a medical institute for women in that city. The annual subscription is five roubles; life members pay 100 roubles, and the donor of 5000 roubles becomes an honorary member. In addition to the income from these dues, money will be raised by means of lectures, concerts, benefit performances at the principal theaters, balls, and fairs. It is hoped that a sufficient sum will be secured to permit of the inception of the work within a short time.

The London School of Medicine for Women has just issued its report for 1899. A list is appended of 254 medical women it has trained. They seem now to be called to the farthest ends of the earth to serve in hospitals and as medical missionaries. Nearly every important town in India has a qualified woman doctor. China claims a large number; even Persia claims one, and South Africa has several. Among the different posts held by women doctors are those of medical examiner of a life assurance company, and two female staffs of post-offices. Women are medical inspectors to high schools for girls and for children, and boarded out under the Church of England Society for Waifs and Strays; they are lecturers to the London School Board, to the Church Army, and to the Local Government Board.

NEW PUBLICATIONS.

ESSENTIALS OF MEDICAL DIAGNOSIS.

This is a second edition, revised and enlarged, of this well known number of Saunders's Question Compends. It is an admirable condensation of the essential facts of medical practice, and will meet a popular demand. It has been especially written for students, and everything has been sacrificed to accuracy and brevity. In the hand of the industrious student the book is one which will facilitate the study of clinical medicine.

Saunders's Question Compends No. 17. Essentials of Diagnosis, Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine. By Solomon Solis-Cohen, M.D., and Augustus A. Eshner, M.D. Illustrated. Second Edition, Revised and Enlarged. Philadelphia: W. B. Saunders, 1900.

DISEASES OF THE INTESTINES.

This treatise is a continuation of the author's previous work on Diseases of the Stomach, and the same lines are followed as those which were laid down in the former work. The practical points of diagnosis and treatment have always been placed in the foreground. The author's extended experience with diseases of the alimentary tract is reflected in the discussion of the subjects treated of in this work. Great interest will be found attached to the chapter dealing with methods of examination. The importance of chemical and microscopical examination of the intestinal contents is now sufficiently well recognized by the profession to make this a matter of general interest. The dietetic principles are fully described in the author's book upon the stomach, but his remarks referring to the dietetic treatment of intestinal diseases will be found of an instructive nature. The work is one which may be heartily commended to all medical readers.

Diseases of the Intestines. A Text-book for Practitioners and Students of Medicine. By Max Einhorn, M.D. New York: William Wood & Company, 1900.

THE TREATMENT OF FRACTURES.

This new work on the Treatment of Fractures will be found of interest to the practitioner and student interested in the subject. The application of the Roentgen ray in the diagnosis of fracture has contributed so much toward an accurate interpretation of the physical signs of fracture that a new work upon the subject is positively demanded. The reader of this book will find many changes in the details of treatment of fractures. The expressions "closed" and "open" fracture are used in place of "simple" and "compound" fracture. "Closed" and "open" express definite conditions referring to the freedom from or liability to bacterial infection. Types of dressings for special fractures are described. The tracings of the Roentgen rays have been made the subject of careful study. The book is very copiously illustrated, and will be found an admirable manual on the subject of which it treats.

The Treatment of Fractures. By Charles Locke Scudder, M.D., Assisted by Frederic J. Cotton, M.D. With 585 Illustrations. Philadelphia: W. B. Saunders, 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Treatment of Chronic Dislocation of the Shoulder.

Carl Grothe (*Münch. Med. Woch.*, May 8, 1900, p. 650) quotes Krumm on the etiology of habitual dislocation of the shoulder, which is traceable in almost every case to abnormal laxity and stretching of the articular capsule. This in turn is due to one of three causes:

1. Either the reenforcing capsular ligaments and the tendons of the musculi rotatores humeri (musc. supra- and infra-spinatus, and musc. teres minor) have been ruptured; or

2. Lesions of the bony parts have induced serious anatomical irregularities—fractures of the caput humeri, chipping or splitting of the glenoid fossa, existence of articular foreign bodies; these lesions almost always concur with a dilatation of the capsular structures.

3. Syringomyelia also plays an etiologic rôle in habitual dislocation of the shoulder.

The treatment has been: (1) Conservative, along the line of protracted immobilization, with indifferent results; (2) surgical, either by resection of the humeral head, with consequent impairment of the joint, or by Ricard's operation. Ricard places the arm in adduction and inward rotation, and actually takes a reef in the capsular structures. Hereupon follows a period of absolute immobilization extending over five weeks, then two weeks of massage and electrical treatment. Result, ideal; no relapse.

Mikulicz opens the articular capsule, causes overlapping of the edges, and bastes them together with buried silver sutures. Result, perfect.

Grothe prefers Mikulicz's operation, which allows of inspecting the articular surfaces and removing foreign bodies, while the overlapping of structures in this point has a tendency to strengthen the capsule in a vital point.

Appendicitis.

At a stated meeting of the Aerztliche Verein in Munich, January 17, 1900, Bauer, speaking of appendicitis, remarked that inflammatory phenomena in the cæcal region almost always proceed from the appendix itself, very rarely from the cæcum, and that fecal retention seems to have no etiologic bearing on the case. The trouble originates mostly with catarrhal appendicitis, retention of secretions, and suppuration, while peritonitis and cellulitis occur without necessarily

previous rupture of the appendix. Fecal concretions may occur as a consequence of catarrhal inflammation; true foreign bodies, however, are a myth. Concretions may lead to ulceration, and this in turn to perforation. Bauer advises early operation of perforative cases, and contends that of the subacute cases from ninety to ninety-two per cent get well with internal medication. He does not believe that every case of appendicitis leads to suppuration, and holds that surgical interference is justifiable only in pus cases. Bauer has no faith in the resorption of aseptic pus, nor in spontaneous gradual evacuation of the focus into the bowel. The tumor to be felt in appendicitis is mostly formed of agglutinated intestinal convolutions. He inclines to operative interference in confirmed suppuration, and also in cases of repeated inflammation which threaten to undermine the patient's constitution.

Internal medication includes absolute rest of the intestinal tract; complete abstention from solid food, only fluid diet being allowable; opiates; avoidance of enemata and cathartics; ice-bag. Complications to be feared are fecal retention, either of the true paralytic variety or of mechanical origin (kinking of the bowel, formation of adhesions), which may lead to invagination of the bowel.

Prophylaxis in Chloroform Narcosis.

Feilchenfeld (*Centralbl. f. Chir.*, No. 4, 1900) states that he has given much relief by the administration of small doses of strophanthus in cases of cardiac oppression, with palpitation and rapid pulse, due to mental excitement and dread. Such condition, though usually met with in cases of weak and dilated heart, may occur in subjects who are apparently quite healthy. To those predisposed to attacks of this kind under the influence of strong emotions, the anticipation and dread of an impending operation are likely to be serious factors with regard to the results of the administration of chloroform. It is very evident, the author states, that a patient of so-called nervous temperament, who after a sleepless night and without nourishment, for which there is no appetite, lies on the operating table in a state of intense anxiety and apprehension, is not well fitted for the administration, especially if this is likely to be prolonged, of a general anesthetic. This condition of nervous cardiac disturbance merits more consideration in a patient about to undergo a serious operation than any cardiac lesion of long standing, which probably has been well controlled by compensatory results. In cases of this kind the author would give tincture of strophanthus in five- or six-drop doses on the last two evenings preceding the date of operation, and also on the morning of this event immediately after the last meal.

Stomach Conditions in Early Tuberculosis.

At the Congress of American Physicians and Surgeons recently held in Washington, Boardman Reed, of Philadelphia, read a paper on this subject, which he summarized as follows: (1) In early tuberculosis the secretion of HCl is very frequently excessive, the peptic glands being in a condition of irritability which causes stimulating remedies of the creosote class to disagree and act injuriously. (2) Oils tend to depress the secretory function of the stomach, and in consequence cod-liver oil is likely to help the cases in which the creosote class of drugs hurt, but on the other hand hurts the cases in which the gastric secretion is inactive, and the other ones in which creosote and its congeners often do good. (3) Therefore it ought to be the rule to ascertain the condition of the secretory function of the stomach before pushing either class of drugs. (4) When analysis of the gastric contents cannot be made, it is safer to combine creosote with cod-liver oil, so as to let one neutralize the other in its effect on the stomach. (5) The motor function is very generally depressed in tuberculosis, and must be restored before a cure can be effected. Drugs avail little in this direction, but diet, exercise, especially in the open air, faradism, and abdominal massage, except where hyperchlorhydria complicates it, are the most valuable means of effecting the result.

Pernicious Anemia.

Pernicious anemia has been successfully treated with antistreptococcic serum, according to Dr. William Elder (*Lancet*, No. 1, 1900), who reports the following case: The patient, a man of thirty-five years, was admitted to Leith Hospital on January 27, at which time he presented a typical picture of the disease. He was exceedingly pale, with slight yellowness of the ocular conjunctiva; his respirations were very rapid and his pulse almost imperceptible. There was no splenic enlargement. The temperature was 100.8° F. Milk diet and a febrifuge mixture were prescribed with half an ounce of whiskey every six hours. By February 1 his temperature had become normal, with a pulse of 100, but he was very suspicious and excitable and refused drugs. As he was quieter on the 3d, he was put on convalescent diet, and the following treatment was begun: Five grains of salol and fifteen grains of bismuth salicylate was given every six hours, and a mouth-wash was ordered consisting of one drachm of tincture of myrrh and twenty-four grains of carbolic acid to six ounces of water. Eight cubic centimeters of antistreptococcic serum was then injected into

the subcutaneous tissue below the iliac crest, which locality received all subsequent injections, as follows: On the 5th, 8 Cc.; 7th, 10; 9th, 5; 13th, 10; 15th, 10; 17th, 10; 19th, 10; 21st, 10; 23d, 10; 26th, 10; 28th, 10; March 4, 10; 8th, 10; 12th, 10; 15th, 10; 18th, 10. No more serum was given, as the patient seemed almost well, with the exception of some nervous symptoms. There was no other medicinal treatment of this case except the occasional exhibition of a laxative or hypnotic. Periodical examinations of the blood gave the following results:

Date.	Red Corpuscles.	Hemoglobin per cent.	Leucocytes.
January 29	797,500	24	4520
February 7	1,962,500	44	4700
February 13	2,340,000	66	4500
February 23	3,355,000	66	5100
February 28	3,700,000	90	5100
March 10	4,360,000	88	4500
March 20	4,800,000	104	

The author's treatment of this case was based on the belief formulated by Dr. William Hunter, that pernicious anemia is due to a definite infection of certain parts of the alimentary tract, notably the gastric mucosa.

The Treatment of Obesity.

Dissatisfied with the results obtained by following the régime of Oertel, von Hosslin (*Münch. Med. Woch.*, 1899, No. 38) has followed out a combination method for the treatment of obesity, his procedure resting on the following principles:

1. Nourishing the patient with a purely albumen-fat diet according to the principle of Ebstein's gout-obesity diet.
2. Increasing metabolism by means of hydrotherapy, in the form of cold applications and sweat baths.
3. Administration of thyroid tablets.
4. Increase of oxidation by means of active bodily exercise.

Carried out in its entirety this method leads to the very best results, though the author reports that the omission of any part of this line of treatment is likely to lead to an increase of the patient's weight. He cites instances where the treatment has been successful, and others where omission of a part of the detail has caused increase of the patient's weight.

Koplik's Spots in Measles.

Attention is called by Haass (*Wien. Med. Presse*, 1899, No. 24) Widowitz (*Wien. Klin. Woch.*, 1899, No. 37), Koplik himself (*Medical News*), and others to the first symptoms of measles. Haass says that

ne has for some time paid attention to the significance of these early symptoms. In three cases in which he could discern distinctly Koplik's spots, there appeared in the next four days measles. In one case there was no exanthematous eruption. In two other cases he could not see the Koplik spots, but measles itself with its characteristic appearances. The form of the Koplik spots was always the same even in the case where no measles occurred, viz., there were on the mucous membrane of the mouth and cheeks small light-red spots of irregular shape with shining bluish-white centers, just as Dr. Koplik himself described them. It was surprising to Haass that the usual eruption first appeared five days or more after the appearance of the spots, while other observers have discovered the eruption in twenty-four hours. It further appeared curious to him that the relatives of the small patients at the first consultation always complained that the child had, according to their opinion, "Scharbuk," which was called in their district aphthous sore mouth. Other peculiarities in the course of the disease he could not substantiate.

Haass has come to the conclusion that the Koplik spots, as an early symptom of measles, are valuable, but that they cannot be recognized in every case of measles.

Medical Theses in the Seventeenth Century.

Funck-Brentano (*Progrès Médical*, April 21, 1900) reviews the works recently published by Dr. Fauvel and Le Maguet, touching upon medical theses in the seventeenth century, among which he culls the following subjects well calculated to test the perspicacity of a medical student: Whether woman is more prone to sexual indulgence than man; whether pretty women are more prolific than others; whether it is better for the sick to drink water or wine; whether citizens of Paris are more subject to cough when the wind blows from the north; and last, but not least, whether Tobias's cure of blindness by the application of fish-gall proceeds from a miraculous or from a natural principle.

Immunity from Malarial Infection.

Dr. Celli Rom (*Centralbl. für Bakteriol. und Parasitenk.*, 1900, No. 3) says that experiments have proven that may persons are immune against malaria even in the most malarious districts; that this immunity is not the result of the formation of toxins and antitoxins which have led to the adoption of the serum therapy. This immunity cannot be obtained artificially by any of the products of organic secretion, but only through euchinin and methylene blue.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Etiology of Cerebrospinal Meningitis.

It has been determined by numerous observations that epidemic cerebrospinal meningitis is not caused exclusively by the meningococcus intracellularis, but may also be due to the presence of the pneumonia diplococcus of Fraenkel. It also appears, as has been elsewhere suggested, that the entire group of microorganisms which bear an etiological relation to this affection have not all been determined as yet. In a case reported by Zupnik (*Deutsche Med. Woch.*, No. 50, 1899), in the fluid obtained by lumbar puncture, intracellular diplococci were found which in morphology and in their behavior resembled the meningococcus of Weichselbaum, but in their method of growth on various culture media were significantly different, and seemed to be identical with or at least closely related to the gonococcus of Neisser.

Two other similar observations from different sources are noted by the writer, and to the question as to whether these are two distinct bacteria the author replies that he considers that both belong to the same natural group, but possess different characteristics. — *Centralbl. f. Innere Med.*, No. 22, 1900.

THERAPEUTICS.

Treatment of Pneumonia by Brewers' Yeast.

Brewers' yeast, which has (*Lancet*, June 9, 1900) given such good results in the treatment of furunculosis, is undergoing the lot of all valuable drugs and is being gradually recommended for every disease. It is now many years ago that in France Dr. Backer, putting into practice the theories of Pasteur as regards infection by fermentation, brought forth what he called the medicine of ferments, and treated a great number of diseases by injecting under the skin pure cultures of brewers' yeast. According to him diabetes, cancer, and even tuberculosis were all amenable to this remedy. The researches of M. Brocq, which confirm those of many of the older physicians in the north of France, have shown that in brewers' yeast there exists a substance which exerts a specific influence upon tuberculosis, while M. Thier-

celin has met with great success by its employment in the "green diarrhea" of infants. Other trials have been made with this substance in the treatment of diabetes.

At the meeting of the Hospitals Medical Society, held on May 18, M. Marie related many successful instances of the employment of yeast in cases of ordinary pneumonia. He was led to try it, owing to no preconceived theory, but purely empirically. M. Marie had under his care an old man, aged sixty-eight years, who was not only suffering from a severe attack of pneumonia, but also from very grievous boils. To cure these last M. Marie prescribed yeast, and was surprised to see that the pneumonia which he had thought would prove fatal immediately began to resolve. Thinking that this was a simple coincidence M. Marie treated seven other cases of pneumonia with yeast, and they all terminated favorably, the same result being obtained whether the pneumonia was lobar or lobular. M. Marie, however, considers that eight cases are not enough to form an opinion as to the value of the method, since the disease in which it was tried often gets well of itself, and in any case the mortality is under ten per cent. He considers, however, that the results are worthy of attention, for in four of the cases the prognosis was most grave, and there certainly seems to be something more than a simple coincidence.

Treatment of Gonorrhea.

At a recent meeting of the Berlin Dermatological Society (*Medical Press*, June 13, 1900) Dr. Caspar gave his views on the treatment of this disease. He is very skeptical as to all recommendations of new remedies applied in the way of injection. All abortive treatment, whether strong injection of silver, application of protargol, or Janet's washings, are to be rejected. No success could be expected, but complications as the results of "abortive treatment" are frequent. The avoidance of any complication is the first aim of treatment. There must be no introduction of any instrument in the acute stage. He distinguishes gonorrhea commencing with violent inflammation from that commencing without such symptoms. For the first he urgently recommends a one-per-cent solution of thallin for injection. Frequent injections, lasting only a short time, are suitable. For the second category the so-called antiseptics (arg. nit. 1 in 10,000 to 1 in 4000, and pot. permang.) are to be recommended. Protargol is less irritating than silver nitrate; it causes less pain, but it is not so effective. A change must constantly be made between antiseptic and astringent injections. General treatment and diet are very important. The drinking of large quantities of liquids and the occasional use of

balsamics are to be recommended. The latter indication is particularly in place in cystitis colli. Local treatment of the posterior part of the urethra (washing out with silver) should only come into use after weeks of the other treatment.

If chronic gonorrhea develops, a special accurate diagnosis is necessary for its treatment. According to the speaker's statistics, out of one hundred cases there was infiltrating urethritis in nine, chronic prostatitis in eighty, infiltrating urethritis and prostatitis in five, and other forms in six. The small percentage of infiltrating urethritis cases is striking, but it agrees with the speaker's other observations. Prognosis in this form is not favorable; without treatment strictures are certain. The treatment was mechanical bougies—stretching and instillation of silver solutions. The large number of prostatitis cases is surprising. Careful examination of the prostatic secretion is important; in thirty cases he found but little pus, in thirty-one a good deal of pus, in twenty-four the secretion was pure pus. Gonococci were found only five times. The prostate was found enlarged by palpation from the rectum only in sixteen cases. As regards the treatment of the prostatitis, local massage is of the first consideration; electricity, electrolysis, local application of iodine and ichthyol. Hydropathic treatment and operative measures (Bottini's) have not proved themselves useful.

In some cases all attempts to remove the symptoms are in vain. Casper distinguished those cases in which all attempts to find gonococci failed from those in which they were present; he found them in only eight per cent. Examination of the morning urine was deceptive. In Von Ziemssen's clinic large numbers of threads had been found in the morning urine of patients who had not had gonorrhea. Cases of bacterorrhea are to be distinguished from gonorrhea; they are incurable, it is true, but quite harmless.

If in spite of treatment the secretion and the filaments remain and no gonococci are found, treatment should be stopped. Aimless and useless treatment can only do harm and might lead to serious complications, and it might set up neurasthenia of a severe type. By the popularization of medicine there is not only a gonorrhophobia, but a gonococcophobia. Polypragmasis is decidedly to be rejected.

Hypodermic Injections of Camphorated Oil.

According to Dr. Vaillant (*Medical Press*, June 13, 1900) camphor is a powerful cardiac tonic and an antispasmodic which deserves the first place among the drugs capable of giving the heart new vigor, and in every case where that organ suffers in the course of fever, injections

of camphorated oil are inoffensive and act rapidly. But although non-toxic, it is needless to exceed the dose of fifteen grains of camphor in the twenty-four hours. The average daily dose of the oil solution (1:10) is from half a drachm to two drachms for an adult. In phthisical patients injections of the oil give good results in modifying the bronchial secretions. The only counter-indication to the treatment is pregnancy, on account of cases of miscarriage attributed to the absorption of large doses of camphor.

Cod liver Oil Palatable Mixtures.

The following are recommended (*Progrès Médical*, April 21, 1900) as palatable methods of administering cod-liver oil:

(1)

Cod-liver oil	100 grammes.
Saccharin	0.40 centigramme.
Acetic ether	2 grammes.
Essence of peppermint	5 drops.

(Essenschitz.)

(2)

Cod-liver oil	240 grammes.
Beef peptone	160 grammes.
Sugar	60 grammes.
Essence of wintergreen	25 drops.
Alcohol	30 grammes.
Water	q. s. to 480 grammes.

(Comby.)

(3)

Cod-liver oil	150 grammes.
Calcium hypophosphite	3 grammes.
Sodium hypophosphite	150 centigrammes.
Glycerin	70 grammes.
Essence of peppermint	5 drops.
Gum arabic	50 grammes.
Distilled water	q. s.

Impetigo: Treatment.

Kistler (*Münch. Med. Woch.*, May 1, 1900, p. 634) recommends the following application for the treatment of impetigo of the scalp and face in children:

℞

Acid. salicyl	2 grammes.
Bism. subnitr	40 grammes.
Talc. pulv	15 grammes.
Ung. aqua rosæ	100 grammes.

M. f. pasta.

Sodium Cacodylate—Elimination.

Imbert and Badel (*Münch. Med. Woch.*, May 1, 1900, p. 633) report conclusions arrived at from their experiments upon the elimination of cacodylate of sodium. After administration *per orem* the salt appears

in the urine of the next micturition, but requires over a month for its complete disappearance. It seems probable that most of the salt is eliminated through the kidneys, and the very slowness of this elimination is of considerable forensic importance.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Blue Discoloration of Toes.

At the annual meeting of the Dermatological Society of London, held May 9, 1900, Mr. Malcolm Morris showed a patient, aged forty-one years, with blue discoloration between the toes and a curious condition of the nails of the hands and feet. The color was noticed a fortnight previously; it could not be rubbed or washed off, and no cause could be found for its occurrence. In December of last year all the nails of the right foot are said to have come off; the nails of both feet are now roughened and opaque, distorted in shape, and raised from their beds by a growth of horny material under them. The great toes are specially affected, and the skin of the right one is rough and scaly. On the inner and plantar aspect of the right heel is a raised circular patch of horny, cracked epidermis. In other parts of the body the skin is smooth and supple. She thinks the condition began as "broken chilblains;" she has always suffered with cold hands and feet, but otherwise has enjoyed good health. She perspires very little as a rule. The finger-nails are somewhat pitted and atrophic in appearance. She has lost all of her teeth but four; her hair is normal.

Experimental Researches on Urticaria.

Philippson (*British Journal of Dermatology*, June, 1900) opposes the current view, accepted by Kaposi and the majority of dermatologists, that urticaria is due to reflex nervous action exerted on the blood-vessels. He regards the view that lymph is secreted passively, in response to increased intravascular pressure, as untenable, and believes, with Heidenhain, that a secretory action of the vascular endothelium is involved. The edema which occurs in urticaria is similarly produced by direct action of poisonous substances upon the vessels in the neighborhood. In support of this view he has experimented upon the dog, which reacts very similarly to man in this respect. Urticaria can be produced by injection into the skin, by means of a capillary tube, of minute quantities of morphine or of atropine, as well as by peptone, one of the bodies proved by Heiden-

hain to act as lymphagogues, and by paraphenylendiamine. An extract of crushed ants acts similarly; the agent in this case is not formic acid, but some unknown substance. Philippson quotes experiments made on dogs in which the sympathetic had been removed, or in which the sensory nerve-supply to the part selected had been cut, in each of which the phenomena of urticarial wheals were produced artificially; the only difference between these experimental results and those obtained when the nerve-supply was intact being the absence in the former of accompanying hyperemia. So, too, in anesthetic areas of skin in leprous patients urticarial wheals developed with absence of hyperemia. Urticarial lesions were also produced in dogs by injecting a weak solution of atropine into a small artery supplying a definite portion of the skin; in this case, again, the condition of the nerve-supply to the area was immaterial.

In opposition to the theory of Unna, that the edema of urticaria depends on spasm of veins and resulting stasis of blood, Philippson found that there was dilatation of the veins in the neighborhood of the lesions produced artificially. He also repeated an experiment of Unna's, according to whom, if a tight bandage be placed around a limb on which urticarial wheals are situated so as to produce local edema, the lesions disappear. The explanation given of this observation by Unna is that the general pressure in the veins rose and overcame the local stasis. Philippson found that the disappearance of urticarial lesions was merely due to their obliteration by the surrounding edema, and that they still remained palpable; while wheals could be produced experimentally upon an edematous area. He concludes that, just as erythemata are, according to his previously expressed views, instances in reality of mild inflammation, so urticaria is the result of a similar process, in which the irritant is of a still lower intensity and exerts a more purely local action.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Diagnosis and Treatment of Chronic Purulent Nasal Discharges.

In introducing a discussion before a recent meeting of the Harveian Society, Mr. E. W. Roughton made some very practical and useful suggestions. He limited his discussion of the subject chiefly to its clinical aspect. By means of questions one should ascertain:

(*a*) Whether the discharge is purulent or mucopurulent. As to

the nature and amount of the discharge inspect the patient's handkerchief.

(*b*) Whether it is unilateral or bilateral. A unilateral purulent discharge always suggests a foreign body in a child, and disease of one of the accessory sinuses in an adult.

(*c*) Whether the discharge is continuous, intermittent, or influenced by change of posture. An intermittent discharge influenced by change of posture suggests that it comes from an accessory sinus.

(*d*) Whether there is an offensive smell perceived by the patient or by others. Subjective fetor is suggestive of disease of one of the accessory sinuses, especially the antrum of Highmore. Objective fetor is a common occurrence in ozena. Combined subjective and objective fetor is the rule in cases of syphilitic necrosis.

(*e*) Pain is not usually complained of unless there is obstruction to drainage and subsequent retention of pus under pressure. The locality of the pain is of very little if any use in diagnosis.

Proceeding to examine the interior of the nose with speculum and probe, the following points should receive attention:

(*a*) The situation of pus. After cleansing the cavity the discharge may be detected coming from some particular place. It is often necessary to make several examinations before one can localize the pus.

(*b*) Polypi. Polypi, together with a purulent discharge, indicate disease of one or more of the sinuses. Their size and character may afford a clue to the sinus affected. It is usually necessary to remove polypi or granulations to ascertain exactly the source of the discharge.

(*c*) Atrophy of the mucous membrane. This condition may be recognized by the abnormally roomy appearance of the interior of the nose.

(*d*) Crusts. Crusts consist of dried discharge and occur in atrophic rhinitis and in syphilitic and tubercular ulcerations of the nose. They sometimes attain extreme size in atrophic rhinitis so as to form accurate casts of the part of the nose in which they are found.

(*e*) Ulcerations. Ulceration of the interior of the nose is most commonly the result of tertiary syphilis and usually attacks the bony septum and the median portion of the nasal floor. Ulceration may be visible or may be concealed by granulations or by crusts. Discharge in such cases is often tinged with blood. Tubercular ulceration is not nearly so common. Lupoid ulceration of the interior of the nose is nearly always secondary to lupus of the skin, and may thus be readily recognized.

(*f*) Adenoids. In children the absence or presence of adenoids

should be determined. Discharge in such cases is nearly always bilateral.

(*g*) Nasal obstruction. This condition, obstructing the free passage of air and causing stagnation of a mucous discharge, tends to render that discharge purulent. In long-standing hypertrophic rhinitis the discharge is apt to become mucopurulent.

(*h*) Foreign body. In a case of unilateral discharge in a child a search should always be made for a foreign body. It may be hidden from view by a mass of granulations. If hard, it may be recognized by contact with a probe, but if soft, as a piece of rag or rubber, it is apt to escape detection.

The balance of the author's remarks was devoted to the subject of special methods of diagnosis, including transillumination, catheterization of the ostium maxillaire, exploratory puncture, etc., directed toward the recognition of disease located in one or more of the accessory cavities.—*Journal of Rhinology and Laryngology*, vol. xv, No. 5.

A Case of Rupture of the Esophagus Caused by Vomiting.

Before the February meeting of the Royal Medical and Chirurgical Society, Dr. Bolles and Mr. G. R. Turner reported a case in which the above mentioned accident had occurred, and gave a tabulated report on the literature of the subject, enumerating sixteen other cases. A woman, aged sixty-two, after taking over night a pill of aloes and rhubarb, which freely purged her, was sick on taking some milk. She vomited four or five times, and the vomiting was followed by collapse of an alarming nature, and epigastric pain. She was given chlorodyne and morphine, but the usual symptoms of profound collapse with gasping respiration continued. Death, which occurred 22½ hours after the commencement of the attack, was preceded some five hours by decided emphysema of the neck extending to the face.

The post-mortem examination showed emphysema of the chest and neck, chiefly in the left side, and left pneumothorax. There was about six ounces of brownish fluid in the left pleural cavity, and a small quantity in the right cavity. The posterior mediastinum was infiltrated with similar fluid. The lungs were healthy; the left one collapsed. One and one-half inches above the diaphragm there was a longitudinal rupture of the esophagus five-eighths of an inch in length, edges thin; no peeling of the mucous membrane; no other disease of any kind. It would seem that this class of injury, though rare, is not so rare as is usually supposed, and it is an accident that is overlooked and sometimes confused with post-mortem softening.—*Journal of Laryngology and Rhinology*, vol. xv, No. 5.

Tuberculosis of the Larynx.

A report of a number of cases of laryngeal tuberculosis is given by Dr. S. G. Dabney in a recent number of the *American Practitioner and News*, together with a discussion of the symptoms and treatment. His conclusions are as follows: (1) Tuberculosis of the larynx before any manifest involvement of the lungs is not a great rarity. (2) In many the diagnosis can be almost positively made from the local appearances alone. (3) The prognosis, while exceedingly grave, is not so desperate as was formerly taught. (4) In addition to the medicinal, hygienic, and climatic treatment, local measures often do much to increase comfort and prolong life, and occasionally cure the local lesion. (5) The first step in local treatment is to thoroughly cleanse the surface, for which an alkaline solution in an atomizer is fairly effective. (6) Where there is ulceration, the cleansing should be followed by insufflation of orthoform and iodoform or nosophen. If pain persists, five-per-cent solution of eucaine B should be sprayed into the larynx before eating. A ten- to twelve-per-cent solution of menthol in oil may also be used with benefit. (7) Where the ulcer is accessible and the conditions permit, lactic acid should be rubbed into it, either with or without previous curettage.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Placental Transmission.

W. Newman Dorland (*American Gynecological and Obstetrical Journal*, June, 1900), in an article on placental transmission, says that while many drugs may be administered to the mother without any noticeable effect upon the fetus, there are certain substances that show a special tendency to traverse the placenta, and, entering the fetoplacental circulation, exert a positive influence for good or evil, according to the condition that may be present in the given instance.

Maternal medication, therefore, is indicated in certain conditions, either in order to prevent the development of a similar condition in the fetus, or to counteract the effect of germs and their toxins already introduced into the fetal economy.

The drugs that have been found to affect the fetus *in utero* are notably opium, mercury, copper, lead, arsenic, and the iodides. In appropriate doses they may be administered to the mothers in suitable pathologic conditions with beneficial results to both mother and child.

Any morbific influence acting upon the mother, either acutely, as in the case of the exanthemata, or more slowly, as in tuberculous and specific infection, will react deleteriously upon the product of conception, and either destroy it through its overwhelming toxic action, or render it feeble and less resistant to subsequent and postnatal invasion; or the disease will run an atypical course *in utero* with or without apparent vestiges at birth.

The entrance into the fetal structures is accomplished through the agency of the fetoplacental circulation. It is probable that access is gained through bacterial action, the germs rendering the placental villi less resistant to invasion, whereby both the microbes and their toxins pass the natural barrier at the choriodecidual junction.

As a rule, the infectious diseases do not manifest their characteristic visceral lesions in the fetus, probably because of the passivity of these organs during antenatal existence. The germs, however, may be detected in large numbers by bacteriologic and microscopic examination.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,

Attending Neurologist to Harper Hospital.

Aphasia with Conservation of Musical Memory.

V. Leyden, at a meeting of the Verein f. Innere Med., Berlin, April 2, 1900, presented a case of aphasia produced by a lesion in the left insula Reilii and accompanied with paralysis of the right side. Speech was reduced to the utterance of three or four words. A notable feature of the case was the possibility for the patient of singing words which he could not speak. The patient sang whole verses of popular songs with distinct enunciation of the text, but was unable to recite or even to repeat any of the words belonging to the song. V. Leyden remembers another case of aphasia coupled with hemiplegia and due to cerebral embolism in which the patient, who was in a condition of complete aphasia, and most of the time semicomatose, could hum a number of melodies without, however, being able to articulate the words.

THE MEDICAL AGE

VOL. XVIII. DETROIT, JULY 25, 1900. No. 14.

ORIGINAL CONTRIBUTIONS.

SOME DEFORMITIES CORRECTED, ETC., ETC.

BY DANIEL LA FERTÉ, M.D., DETROIT, MICH.,

Professor of Anatomy and Orthopedic Surgery in the Detroit College of Medicine; Surgeon to the Children's Free Hospital and Harper Hospital, etc., etc.

(*Continued from page 489.*)

Case 4.—This child, ten years of age, was born with double talipes of the varo-equinus variety. She was operated upon at the age of six weeks by the subcutaneous method. The parents inform me that after the operation the feet were put up in plaster of-Paris bandages, which were left on for three or four weeks. The treatment which she had at that time left her feet in the condition noticed in Fig. 12. It will be noticed how her knees were held in the position of recurvatum to allow the heels to touch the floor. There was also a decided inversion of the toes and very marked contraction of the structures in the soles of the feet. January 12, 1900, the tendo Achillis and posterior ligament of the ankle were cut to allow the foot to be brought well beyond the right angle with the leg. Section was also made of the anterior portion of the internal lateral ligament of the ankle, superior astragalo-scaphoid ligament, abductor pollicis muscle, flexor brevis digitorum muscle, plantar fascia, tendon of posterior tibial and flexor profundus digitorum muscles, and the feet put up in plaster-of-Paris casts. The casts were removed at the end of three weeks. They were reapplied and removed occasionally until March 20, when she began to wear a pair of ordinary shoes, and was discharged April 12, with her feet in the condition shown in Fig. 13, and her knees occupying a normal position.

Case 5.—May C——, six years old. Such an appearance of the lower limbs as is shown in Fig. 14, called genu varum, is much more

FIG. 12, CASE 4.

FIG. 13, CASE 4.

frequently found in the negro than in the white race. The opposite condition, or genu valgum, is also peculiar to the former. The trouble is usually traceable to the rickety diathesis. In this case there were present other evidences of early rickets. We observe in these cases a weakened condition of the internal lateral ligament of the ankle and a breaking down of the anteroposterior arch of the foot, constituting another variety of deformity, designated flatfoot. The latter condition I have always found to disappear when the deformity of the legs was corrected.

There being also a decided anteroposterior curve in the tibia in this case, instead of making a linear osteotomy of the bones I took out a V-shaped piece from both tibia and fibula, including the entire thick-

FIG. 14, CASE 5.

FIG. 15, CASE 5.

ness of the bones; this had the effect of correcting both deformities at one sitting. Union in this case was very slow, and the plaster casts had to be worn for an unusually long time, and even after union had taken place the seat of operation remained so tender that the child could bear scarcely any weight on her limbs. In all my experience this is the only case where union of the tibia and fibula was tedious in healing after section of those bones, and it has seemed strange to me why union in cases of fracture of those bones, as discussed in Case 3 of this article, should prove so obstinate, when it takes place so

rapidly and kindly in almost all cases after section or breaking to relieve deformities.

Fig. 15 represents the condition of the child when she left the hospital.

Case 6.—The opposite to the last case is designated genu valgum In this condition we find that a line drawn from the head of the femur to the middle of the ankle-joint passes outside of the center of the knee-joint. It is found also that if the knees are brought together it

Fig. 16, Case 6.

Fig. 17, Case 6.

is impossible to make the malleoli of the tibiæ touch one another. Like genu varum, this trouble is generally caused by rickets. The majority of cases are found in childhood, between two and four years of age. When it occurs in young adults it is usually in subjects who have to be upon their feet much of the time. As in genu varum, flat-foot not infrequently accompanies this deformity, in fact it sometimes stands in causative relation to it; but my experience has been that when the genu valgum is rectified the flatfoot disappears.

In the present case the subject, W. B——, was 3½ years old, and Fig. 16 shows his appearance. The cutaneous veins about his head and neck, together with epiphysial enlargement of some of the super-

ficial joints, indicated very plainly a rickety diathesis. Not thinking that the wearing of braces would be of any particular service, or at best would be a long, tedious process, I decided upon operation.

Whether there was an actual elongation of the condyle of the femur, or whether the deformity of the knee was due to the fact that the epiphysis was obliquely united to the shaft of the femur, the Macewen operation was decided upon. This consists in dividing subcutaneously the shaft of the femur a little above the lower epiphysis, then bringing the leg around in the straight position and retaining it there until union has taken place. That was the operation done in this case, and the limb was put up in plaster of Paris, which was left on for three weeks. The patient was discharged from the

FIG. 18, CASE 7.

FIG. 19, CASE 7.

hospital in twenty-eight days from the date of operation, showing a decided improvement in his appearance (Fig. 17), and having lost that peculiar gait which patients with this deformity manifest on account of being obliged to swing their feet from the median line in order to make the knees clear each other.

Case 7.—Fig. 18 represents a child twenty months of age suffering from a cleft of both hard and soft palate, and single harelip. I operated on the cleft palate before closing the fissure in the lip, as this method afforded more room. Although I operated thrice on the palate, my success was only partial, it having been found impossible to keep the stitches from sloughing.

To close a fissure of the lip I generally resort to Colles's method, which consists in splitting the lip on one side of the cleft at the junc-

tion of the vermilion and cutaneous borders, and inserting in this a small flap taken from the opposite side. This method has the effect of thickening the margins of the cleft, which will generally be found thin; besides, it leaves an oblique scar, which is less perceptible than a vertical one.

To obviate the tendency to flattening of the left nostril I made use of the button suture, after having sewed the lip together. The button pressed upon the left ala, and the suture holding it pierced the substance of the lip down to the mucous membrane and emerged from the substance of the lip a little below the right ala. This button suture should not be left in more than four or five days, because if left in longer there is danger that the ala might remain puckered more than is desirable.

This child was discharged, with her lip after operation making a decided improvement in her appearance (Fig. 19).

Case 8.—E. S——, 6½ years old, was brought to us August 24, 1896. The parents stated that the boy began to have pain in his left leg on July 1; this gradually grew worse, and decided swelling made its appearance. The limb had been poulticed until pus was evacuated. When he entered the hospital there was free discharge from three different openings. The probe detected bare bone in all these openings.

FIG. 20, CASE 8.

This evidently was a case of osteomyelitis with extensive necrosis. On August 29, 1896, I cut down and removed subperiosteally almost the entire tibia, leaving only about two inches of the bone at the

upper extremity, and somewhat less at the lower end. From this time on the suppurative process ceased, and new bone was formed, with the exception of a space about four inches in length in the middle of the leg, where bone refused to form.

On the 17th of December, 1896, I cut down to the bottom of this space between the two ends of the bone, and filled this gap with Senn's bone chips. This had the effect of starting anew the growth of bone, but the ends of this new bone overlapped one another, and were separated by connective tissue, and consequently were movable.

On April 17, 1897, I cut down and sawed off the overriding portions of the bones, drilled holes through the ends of the bones, and fastened them with kangaroo tendon. Union took place kindly, and the boy recovered with a useful limb. There is no shortening, and the lad can run and play with a leg apparently as strong as its fellow. A slight depression is noticeable below the knee (Fig. 20), but this sinks into insignificance when compared with the good result obtained.

ACUTE DISEASE OF THE SUPRARENAL CAPSULE.*

BY D. C. BROCKMAN, M.D., OTTUMWA, IOWA.

There is a growing tendency on the part of all medical societies to spend too much time on special subjects, to the great detriment of the more general consideration of medicine as a whole.

The reason is easy to understand, as any one would much rather listen to a description of the technique of a gastrectomy than attend the discussion of so commonplace a subject as lung fever or diphtheria. Yet for the general practitioner and his patients it is far better for him to go through the drudgery of common things than to spend his time speculating as to how the mortality percentage of the too popular operations referred to can be reduced so as to be expressed in less than three figures.

In fact, if we can again revive the former popular specialty of general internal medicine, that for years has been almost forgotten, we will be taking a step in the right direction. The greatest weakness in our profession to-day is our inefficiency in making accurate diagnoses.

I am of the opinion that when called to account we will find we have committed many more sins of omission to make diagnosis than of commission of errors of treatment. Most any one can treat a case after the diagnosis has been made. It is to call your attention to some diagnostic points of a not frequently seen disease that I have

*Read before the Des Moines Valley Medical Association, June 19, 1900.

prepared this brief paper; especially since recent literature has changed some of the older diagnostic landmarks.

I refer to the acute form of disease of the suprarenal capsules, or the so-called Addison's disease. When most of us were in college—especially the older members—we were taught that Addison's disease was a very slow chronic condition, lasting for years; but the literature of the past decade has radically changed this part of the diagnosis, so that now we find there are almost as many acute cases reported as chronic.

My attention was called to this subject by a case of the acute form of the disease I saw last March. The patient, aged twenty-eight, of previous good health, habits and family history negative, some months ago began to notice that he was unable to stand ordinary exertion the same as usual. He was perfectly well, except, as he said, that he was too lazy to walk a block to the postoffice once a day. About six weeks before I saw him he was taken with vomiting, pain in the upper part of abdomen, and fever. In a few days he developed marked typhoid symptoms, and the case simulated typhoid fever very closely —in fact, two or three competent physicians pronounced it typhoid at first. He complained of but little pain except tenderness over renal regions; stomach was very intolerant, the vomiting resisting every form of treatment. Constipation was very obstinate. Great muscular weakness developed rapidly, with marked muscular atrophy; heart's action ran up rapidly in frequency, and down in volume and strength. In fact, his decline was more rapid than is usually seen in severe typhoid fever; the skin was of a dark tan color. At the end of six weeks he was very greatly emaciated, was little more than skin and bones; muscles scarcely discernible; skin as dry as parchment and very dark; abdomen was very much retracted, so that I could trace abdominal aorta as easily as if under the skin; pulse scarcely perceptible, beating 150 to 160 times per minute; temperature elevated slightly at times, but subnormal most of time; urine normal, except specific gravity 1028, and markedly acid. Death was evidently impending, and nothing could be done to avert it. The patient died the third day after I saw him, and six weeks after going to bed, from asthenia. The only points in his case that are atypical were the rapid muscular atrophy and the dry harsh skin. Treatment had little or no influence on the course of the disease further than that strychnine, digitalis, and concentrated nourishment probably prolonged life a few days.

The glands, known as the suprarenal capsules, were evidently destroyed early in the course of his disease, and nothing known to our science has been able to check the progressive muscular weakness in such cases.

Destruction of the adrenals is usually, probably always in non-malignant cases, due to tuberculosis, and here, as elsewhere, the tubercular process may be either slow or fast. This latter fact was unknown till of late years; and undoubtedly many of the acute cases have not been recognized, but have passed under the caption of typhoid or some other acute febrile disorder.

In looking back over my work I think I can find some of my mortuary reports that could be revised without doing any violence to the facts, and one or two might probably be classed in this list.

The diagnostic points in the acute form of the disease are:

1. Great general prostration in a previously healthy young or middle-aged person without visible cause.

2. Acute febrile action of a typhoid type that is due to acute miliary tuberculosis of the organs.

3. Accompanied or followed by persistent anorexia and vomiting with usually obstinate constipation, but occasionally constipation is alternated with uncontrollable diarrhea.

4. Usually there is slight pain and persistent tenderness over the renal region.

5. In case the patient lives long enough the characteristic bronzing of the skin appears, but in many of the acute cases the typical discoloration does not have time to develop. The course and duration of the disease vary and depend on the form of the tubercular process. Many cases die within a week of the time they take to their beds, and within a month of the time they show the first symptoms of the muscular weakness. Most of the acute cases last from two to ten weeks, while in the very chronic cases the disease lasts for years. In other words, the course of Addison's disease is the same as tubercular troubles in other parts of the body, at times very acute and often very chronic.

Post-mortem examinations always show atrophy or destruction of the little almond-sized gland that sits perched on top of the kidneys, with whose functions we are entirely unacquainted, but whose destruction means sure death to the owner.

There is no specific treatment for the condition. The anemia and debility must be met on general principles. In chronic cases much can be done to prolong life by good food, hygiene, and tonics.

A few years ago many favorable reports were published following the exhibition of the extract of suprarenal capsules, or the raw adrenals were fed to the patients. Many cases were undoubtedly benefited by this treatment, and some may have been cured, while several cases were made worse by their use. It should be employed in chronic cases and the results closely watched, but it is worthless in acute cases.

A. F. Jonas, of Omaha, about two years ago removed by a transperitoneal operation a right suprarenal capsule greatly enlarged by tubercular deposit, with apparent cure of his patient. He predicts good results by the removal of a diseased gland before its fellow is involved—a theory that sounds plausible, but I am afraid will not prove of much value from the fact that the disease is seldom unilateral, and is not generally recognized till the glands are diseased beyond all hopes of remedy. But his case should be kept in mind, and if a like one presents itself it should be treated surgically.

For the present we are obliged to admit that the disease is noncurable except in possibly a very few chronic cases, and even in them we must look with suspicion on the cures for several years, and not be surprised at relapse, as well as to accept the diagnosis of reported cures with caution.

RECURRING MEMBRANOUS FAUCITIS, DUE TO THE BACILLUS OF FRIEDLANDER.*

BY EMIL MAYER, M.D.,
Surgeon Eye and Ear Infirmary, New York.

Friedlander's bacillus, first described in 1882, has been found in local manifestations in stomatitis, ozena, rhinoscleroma, acute suppurative rhinitis, in pus in the antrum of Highmore, in membranous bronchitis, in suppurating dacryocystitis, and in ulcers of the cornea. In manifestations by extension it has been found in parotiditis, otitis, bronchopneumonia, purulent pleurisy, pericarditis, pyelonephritis, and meningitis. Generally it has been found in pyemia and septicemia.

The first mention of its occurrence in connection with pharyngeal affections was made by Max Stoss in 1895, who described one case. In 1897 Nicolle and Hebert described five others. Pakes has brief notes of five more cases in 1898, and Billet reports two in 1899. To these recorded cases the writer adds another.

Regarding the frequency of the occurrence of this bacillus, Hebert reports that in 1600 examinations of cultures taken from diseased throats, it was found present eight times, while Pakes found it five times in 500. The brief histories of the recorded cases are given, and all are in accord that the distress occasioned is very slight, often in no proportion to the extent of the affection. The patients complain of little or no discomfort; the exudate, which occurs most frequently

* Abstract of a paper read before the American Laryngological Association at the Twenty-second Annual Congress at Washington, D. C.

on the tonsils and on the pharyngeal wall, remains persistent for a long time, until it eventually disappears. There is no glandular swelling and no fever. The membrane is pearly white, is very adherent and difficult to remove with forceps, and leaves a bleeding surface when forcibly detached.

The case cited by the author was referred to him by Dr. J. C. McReynolds, of Dallas, Texas. A young lady of nineteen had been under the care of the latter for eighteen months. During all this time a membrane formed either over the entire pharynx and soft palate or over the latter alone. This membrane formed, and subsequently exfoliated on the third day; an interval of entire freedom then existed, when it reformed. After exfoliation the throat appeared normal. If it was prematurely removed a raw surface bleeding on manipulation was present. When it exfoliated large pieces were removed which were pearly white, with numerous pinhole perforations. Constitutional manifestations were very slight and mild in comparison with the local involvement. At no time during the past year and a half had she been free from the membrane more than fourteen days.

The growth of the membrane was carefully watched by the writer and described as being opaque-looking at first; then a very thin adherent membrane appeared and was exceedingly tenacious. In a few hours it became thick and was pearly white. Twelve hours later exfoliation occurred, and large pieces could be removed without pain, the underlying mucous membrane being reddened but not bleeding. The membrane was all thrown off and nothing could be noted of any preexisting affection from its appearance. Two days later the process was repeated.

These conditions remained for the month that she was under the writer's observation. Her general condition was otherwise good.

Cultures sent to the local health department resulted in the report of "no Klebs-Loeffler bacillus."

Examinations of the membrane by Geo. S. Dixon and Eugene Hodenpyl showed it to consist of squamous epithelium arranged in layers of from three to six cells in thickness. On the surface of the membrane, between the cells, as well as within them, were very numerous bacteria, in the form principally of short bacilli. There was no fibrin present, neither could leucocytes, blood-vessels, nor connective tissue be detected.

Bacteriological examination by A. J. Lartigan showed Friedlander's bacilli in pure culture. A guinea-pig was inoculated, and the bacillus of Friedlander was found in the spleen.

These reports are all given in minute detail, and a colored draw-

ing of the diseased state accompanied the paper. The similarity of the cases found in the literature and the one presented by the writer is striking, there being the same rounded character to the edges, the same pearly points strewn through the membrane, the same adhesiveness in the early stages, and the same bacillus in pure culture. There were some points of difference in them, though. In but one other case was the entire soft palate covered. In none of the recorded cases was there any exfoliation. But the chronicity, the absence of any constitutional signs, the membrane formation, and the bacillus always present in pure culture, make the diagnosis positive.

The question of the possibility of malingering was gone into thoroughly and emphatically negatived.

As far as treatment was concerned, the disease seemed to be limiting itself by very slow process indeed, orthoform in alcohol always rendering the patient comfortable.

The author concludes thus:

1. That anginas due to the bacillus of Friedlander may exist in a subacute or chronic form.

2. They occasion no distress except perhaps in the beginning of the membranous deposit.

3. They may appear in membranous form, exfoliating and recurring.

4. In the chronic form treatment seems to be of no avail, the bacilli eventually becoming much less active, and the condition ceases by limitation.

5. They are probably much more frequent than the few recorded cases seem to indicate.

THERAPEUTIC USE OF GUAIAMAR—A PLEA FOR ITS FURTHER USE IN PHTHISIS PULMONALIS.

BY JEROME T. GARDNER, M.D., BRENTWOOD, CAL.

Our leading clinicians and investigators of the treatment of the "great white plague" recognize guaiacol, pure or combined, to be the best antitubercular remedy—an antipyretic, *per orem* and by inunction—by its direct action on the toxins in the blood. It is also a genuine intestinal antiseptic, an analgesic, and an expectorant.

Phenol (carbolic acid) in medicinal doses is antipyretic, germicidal, and an antiseptic to the genito-urinary tract and the air cells of the lungs in its excretion.

Glycerin is an antiseptic; it exerts a favorable action on the kidney structure as it passes through it, and is a reconstructive of much value.

We have in guaiamar a remedy that combines the action of guaiacol, phenol, and glycerin, and its composition indicates its use in chronic septic diseases, particularly those affecting the lungs and bronchial tubes, and we have demonstrated in practice that it is an intestinal antiseptic of the first rank. To obtain the best results in the treatment of chronic diseases, the alimentary canal must be looked to and maintained, as far as can be, in a normal condition. Assimilation is thereby promoted and nutrition increased. Cases of incipient and secondary tuberculosis will improve if intestinal antisepsis be maintained.

The toxins of the tubercle bacillus, and other germs in cases of mixed infection, circulate in the blood and directly affect the vitality of the blood cells. The integrity of the circulating medium is essential to the maintenance of nutrition. We now know that in all chronic wasting diseases there is a diminution of blood vitality, and that we must improve the assimilative processes to render the blood more resistant to the toxins constantly being thrown off from the diseased parts. Guaiamar is a remedy that will do this in a surprisingly large number of cases.

Case 1.—Female, aged twenty-two. Family history, father's side, tubercular; patient anemic; losing weight two months; cold on chest and cough for that time; no strength nor appetite; night sweats; greenish expectoration; first seen September 14, 1899. Temperature 101°, pulse 98. Patient put on nutritious diet and bovinine, and given one capsule after meals, increased to two, of the following prescription:

℞ Guaiamar,
Calcii sulphide,
Iodoform,
Strychnine phosphate.

M. Ft. capsule No. 24. Sig.: as directed.

On September 22, at 3.30 P.M., temperature was normal; and on October 1 pulse was 80, temperature 98⅘°, and patient said she was well. Treatment discontinued, and she has continued well through the winter.

Case 2.—Boy, aged fifteen; three months sick. Irregular chills, followed by fever; tongue heavily furred; pains through the chest; expansion of right side of chest impaired; catarrhal conditions of tubes on that side, and dulness of right apex; cough slight; expectoration yellowish-white. Treatment: Cleansed alimentary canal with calomel and bicarbonate soda, followed by Epsom salts, and put the boy on the following:

℞ Guaiamar,
Quinine sulphate,
Pulv. ginger,
Strychnine phosphate.

M. Ft. capsule No. 12. Sig.: One capsule before meals and at bedtime.

This patient improved steadily and went to work picking fruit within a month.

Case 3.—Female, aged thirty; three years ago exposed to tuberculosis. Shortly afterward health declined gradually; cough; loss of weight; and each winter until this one has had a hemorrhage from the lungs. Patient has been taking steadily guaiamar in five-grain doses, and the iodide of calcium in two grain doses, these being given in an aromatic preparation of cod-liver oil. I have full notes on this case. Patient said recently that she felt better than for several years.

Case 4.—Male, aged sixty years. Bronchial asthma and severe dyspnea greatly relieved by guaiamar; its sedative expectorant action was marked in this case. Before use of guaiamar the urine showed albumin. The third day after using guaiamar the urine was normal. In this case I gave the following:

℞ Guaiamar,
Glycerin,
Alcohol,
Aqua, q. s.

M. Ft. in water before meals.

Case 5.—A patient with chronic liver disease, complicated by occasional intestinal hemorrhage and much pain, was greatly relieved by ten-grain doses of guaiamar in capsule every four hours.

In conclusion I can say from my experience with guaiamar that it is an eminently satisfactory remedy in the class of cases above recorded. I believe it is the duty of every physician to give the article close study in the treatment and prevention of phthisis pulmonalis, and I believe the latter can be cured in the incipient stage. Treatment must be constant and continued over a long period of time, and as guaiamar is a non-toxic constitutional antiseptic, it will give good results if intelligently prescribed.

At a meeting of the corps of teachers of the New York School of Clinical Medicine, held at the Academy of Medicine, June 21, 1900, it was decided to wind up the affairs of the school and close it permanently. This action was taken in consequence of continuous interference of the lay board of trustees in its affairs.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

RECENT VIEWS OF TUBERCULOSIS.

The recent meeting in Naples of the International Congress for the Prevention of Tuberculosis was in many respects a notable one. While no new discovery was exploited, certain doctrines of tuberculosis which have long been assuming definite form were stated with lucidity and clearness. Professor De Giovanni, of Padua, the chairman, stated that experience has shown that there is present no effective predisposition to tuberculosis unless the predisposition has reached a certain grade. Unless this has been reached the causal factor—a specific germ—remains inactive. Tuberculosis, therefore, cannot be said to begin when the causal factor enters the system, but infection follows when the system has acquired a special predisposition. Further study of the morphology of the individual is necessary to learn just what this predisposition is, and how much it can be antagonized at different periods of the individual's life will become the salient feature in prophylaxis.

M. Lannelongue, of Paris, reported some interesting experiments regarding the influence of climate on the course of tuberculosis. Like groups of guinea-pigs were inoculated with an equal amount of tuberculous matter, and kept under varying conditions, all, however, with the same amount of nourishment. One group was taken to the mountains, another to the seacoast, and a third was kept in the laboratory. Animals kept in the laboratory presented the lowest mortality statistics, and the author attributed this to the uniformity of temperature and the diminished loss of energy on account of the confined movements of the animals—a passing tribute to the great value of rest and equable climate in the treatment of this disease.

Kallivokas, of Athens, made some valuable remarks concerning the functions of the State in the prevention of tuberculosis. The

hygiene of the school was very important, and he thought that school-children themselves should be instructed regarding tuberculosis; that the reporting of tuberculosis cases should be obligatory; and in case of death, the house, the clothing, and the furniture should be disinfected. He also thought that patients dying of tuberculosis should be cremated. The importance of the erection and maintenance of special sanatoria was emphasized by many speakers.

Among diagnostic devices Sciallero, of Genoa, laid great stress upon the importance of the Roentgen rays in the early diagnosis of tuberculosis. Changes of very slight character in the movements of the lung produce marked changes in shadow. Pleuritic adhesions and indentation of the borders of the lung can be easily detected, and circumscribed consolidations of the apices not physically recognizable can be precisely diagnosticated by means of radioscopy. The proceedings of the Congress were marked by a high degree of scientific activity. Resolutions were passed recommending the government to make obligatory the tuberculin test of milch cows.

EDITORIAL NOTES.

The Appendicular Symptoms of Typhoid.

For the prevention of a reasonable mistake, that of confounding typhoid and appendicitis, it is well to remember that in typhoid the appendix may be actually inflamed or ulceration may be taking place in contiguity to it. The medical press is recording cases in which patients sent in for operation upon examination were found to be suffering from typhoid infection. The prevalence of typhoid at the time makes the appreciation of this distinction very necessary.

Antityphoid Serum.

The value of inoculation treatment against typhoid fever is being investigated pretty thoroughly in South Africa. Sir William McCormac speaks of it in this wise: "No decided opinion can yet be given on this point, since there are not sufficient data for statistics. The observations made seem to show that those inoculated are less apt to take the disease, or, if they are attacked, they have it in a milder form; but the question is still *sub judice*. It must be remembered that enteric fever is endemic at Ladysmith, but I was told that the proportion of enteric during the siege was not so great as during the corresponding period of the previous year."

ITEMS AND NOTES.

THE plague is reported to be increasing in Australasia.

THE New York School of Clinical Medicine has been closed.

LOUISIANA has the only home for lepers in the United States.

AN effort is being made to establish a maternity hospital at San Juan.

THE graduating class at the Harvard Medical School this year numbered 100.

FUNDS are being collected to establish a medical institute for women in Moscow.

SURGEON-GENERAL Y. SANEYCHSI, of the Imperial Japanese Navy, has been made a baron.

THE Presbyterian Hospital of New York City has received an anonymous gift of $20,000.

DR. JOHN WILLIAM MOORE, editor of the *Dublin Journal of Medical Science*, has been knighted.

THERE are at present over 8000 students of medicine in the universities of the German Empire.

THE late Mrs. Schley, of New York, bequeathed $10,000 to the New York Medical College for Women.

JUDGE NEELEN, of Milwaukee, recently fined two Christian science healers $50 each for treating a case of diphtheria.

DR. W. W. KEEN has succeeded in raising $50,000 as a library fund for the College of Physicians of Philadelphia.

SIR WILLIAM MACCORMAC received the degrees of M.D., M.Ch., *honoris causa*, in the University of Dublin, June 28.

REAR-ADMIRAL JAMES RUFUS TRYON, U. S. N., has been appointed physician-in chief of Sailors' Snug Harbor, Staten Island.

THE medical schools for men and women of the Northwestern University, Chicago, will be continued as separate institutions.

THE Governor of Missouri has issued an edict quarantining cattle from Kentucky because of the alleged existence of tuberculosis among them.

According to an Italian paper 8000 lire has been appropriated by the government for an international congress of physiology to be held at Turin next year.

Dr. Jameson, who led the raid into the Transvaal a number of years ago, has now been elected unanimously a member of the Cape Parliament for Kimberly.

A prize of 3000 lire has been awarded to Professor Grassi, in appreciation of his researches on the subject of malaria, by the Venice Instituto de Scienze e Lettere.

A Boston physician, a graduate in medicine of McGill University in 1833, has been convicted on his own confession of stealing book plates from the library of the Harvard University.

George P. Dreyer, associate professor of physiology in the medical department of Johns Hopkins University, has accepted the chair of physiology in the College of Physicians and Surgeons, Chicago.

Dr. Wm. Osler, of Baltimore, delivered the address at a conversazione of the Medical Graduates' College and Polyclinic, London, on July 4. He took for his subject "The Teaching of Practical Medicine."

The death of Dr. Ernest Cadet de Gassicourt, of Paris, well known for his valuable contributions to pediatrics, is announced in the *Gazette Médicale de Paris* of June 16. He was in the seventy-third year of his age.

Physicians who propose attending the Third Pan-American Congress, which will be held in Havana, Cuba, December 26 to 29, 1900, will, according to Dr. Johnson, of Washington, D. C., be favored with greatly reduced rates.

Miss Sheldon Amos, M.B. Lond., has been appointed a medical officer at Suez under the Board of Quarantine. This is the fifth appointment of an English medical woman as a sanitary medical officer in connection with the plague in the East.

According to *The Lancet* of June 16, Lord Lister has consented to deliver the third biennial Huxley lecture on "Recent Advances in Science and Their Bearing on Medicine and Surgery," at Charing Cross Hospital, London, on October 2. The first lecturer was Prof. Michael Foster, and the second Professor Virchow.

According to a recent despatch from Bombay, cholera prevails to an unusual degree in the entire Bombay Presidency, with the excep-

tion of three districts. The cases reported for the week ending June 26 numbered 20,000, and the deaths during the same month over 12,000.

At a recent meeting of the Johns Hopkins Hospital Medical Society a rare example of a caudal appendage was shown in a male child three months old. This appendage was 2¼ inches long and sprang from the tip of the coccyx; it contained neither bone nor cartilage. It retracted markedly at the tip when the child cried.

The two xiphopagous twins, Rosalina and Maria, have been successfully separated by Dr. Alvara Ramos, of Rio de Janeiro. A first operation for this purpose was made last winter, and was described in the *Medical News* of March 5. The bony structures were at that time divided, when shock compelled the operator to desist.

Tarantulas are being raised in Australia for the sake of their webs, the filaments of which are made into thread for balloons. They are lighter than silk, and when woven stronger than canvas. Each tarantula yields from twenty to forty yards of filament, of which eight twisted together form a single thread.

In the opinion of a Berlin physician, Dr. Rosenbach, the causes of that annoying and persistent redness of the tip of the nose, which is particularly frequent among women of a delicate complexion, are the pressure of the veil and the friction produced by it. Treatment consists primarily in the disuse of the veil.

At the coming meeting of the Canadian Medical Association, to be held at Ottawa, September 12 to 14, Mr. Edmund Owen, London, England, will deliver the address in surgery. Others who will take part are: Drs. Shattuck, Boston; Louis Gerster, A. M. Hamilton, and Dr. Fox, New York City; Nicholas Senn, Chicago. Dr. William Gardiner, of Montreal, will deliver the address in gynecology.

At the annual meeting of the American Medical Editors' Association, held in Atlantic City on June 4, the following officers were elected for the ensuing year: President, Dr. Alexander Stone, of St. Paul; Vice-President, Dr. Chas. F. Taylor, of Philadelphia; Treasurer, Dr. S. W. Kelley, of Cleveland; Secretary, Dr. O. F. Ball, of St. Louis. The next meeting of the association will be held at St. Paul in June, 1901.

According to a clipping from a Harlem, N. Y., biweekly, Dr. Eduardo Wilde, the new minister plenipotentiary, is the latest addition to the diplomatic set in Washington. He was born in Buenos

Ayres and was educated in the National College. After receiving his degree he was appointed physician-in-charge of the cholera lazaretto of his native city. His record at the hospital and at the college, where he was still studying, won for him from his alma mater the first prize of 2500 pesos.

THE *Canadian Journal of Medicine and Surgery* for June tells the following story of Sir William MacCormac, the president of the Royal College of Surgeons: "Often, to save time when studying in his laboratory, he used to have a light lunch served there. Once his assistant heard him sigh heavily, and, looking up, saw the doctor glaring at two glass receptacles on his table. 'What is the matter, doctor?' he was asked 'Nothing in particular,' was the reply; 'only I am uncertain whether I drank the beef tea or that compound I have been working on.'"

DR. CHAVERNAC, of Aix, France (*Journal of the American Medical Association*), has designed a new army stretcher which possesses two chief advantages over the stretchers now in use, namely, the wounded man can be lifted from the ground without shock or pain, and he is not touched by the bearers while this is being done. The stretcher is rigid, and is made in halves, which, by pressure, fold together under the body of the patient. When loaded, the stretcher is mounted on a light bicycle carriage. It requires only two bearers, as compared with four for the stretchers now employed.

A JAPANESE paper, the *Jiji Shimpo*, finds reason for lamentation in the fact that whereas medical students in Europe graduate at twenty-two or twenty-three years of age, in Japan the age is over twenty-six. The paper in question points out that Japanese mature and age earlier than Europeans, and that as the period of usefulness in life in Japan is considered to be over at fifty, the period of active practice is short. In Europe a man is usually at his best at fifty, and even at sixty, seventy, and over grave and reverend seniors are not looked upon as uselessly barring the way of ambitious juniors.

A PRINCIPLE has been cultivated from the Sarracenia or pitcher plant which the discoverers, Drs. Brittingham and Bowers, of New York, have named bioplasm, because its action can be accounted for in no other way than that it stimulates protoplasmic activity. It is indicated in any deviation from normal functionating, and acts by restoring the physiological equilibrium. It has been exhibited in over one hundred cases with almost uniformly favorable results, and it is now in the hands of a number of the best physicians of New York for investigation. The medical world will soon be advised as to the results of their experiments.

According to the *Journal of the American Medical Association*, in the experiments made by Charles P. Worcester regarding the metal stoppers used in bottles for preserves, aerated waters, etc., he found that an alloy of lead was present; in some instances they contained as much as 0.2 to .935 per cent of that metal. Lead was found in all samples of fruit beverages and syrups examined; the largest amount found in a sample was 1.05 milligrammes, and the minimum .05 milligramme. The stoppers of these bottles were tested for lead, and it was found to exist in as high a proportion as 3 5 to 50.7 per cent. He condemns the use of lead as an ingredient in the manufacture of such stoppers.

An interesting speech was made, says the *London News*, at the annual meeting of the new Hospital for Women, London—of which all the physicians, surgeons, and students are women—by the eminent surgeon Sir Henry Smith. He stated that he had lately been present at a number of most serious operations performed by women surgeons, and had come to the conclusion that the small hands and delicate touch of women are particularly suitable for surgical work. The same tactile skill that makes a good needlewoman, he intimated, is of the highest use in modern "conservative" surgery; and he added that the results gained in that hospital would compare favorably with those recorded anywhere else.

A practice closely akin to hibernation is said to be general among Russian peasants in the Pskov government, where food is scanty to a degree almost equivalent to chronic famine. Not having provisions enough to carry them through the whole year, they adopt the economical expedient of spending one-half of it in sleep. This custom has existed among them from time immemorial. At the first fall of snow the whole family gathers round the stove, lies down, ceases to wrestle with the problems of human existence, and quietly goes to sleep. Once a day every one wakes up to eat a piece of hard bread, of which an amount sufficient to last six months has providently been baked in the previous autumn. When the bread has been washed down with a draught of water, every one goes to sleep again. The members of the family take it in turn to watch and keep the fire alight. After six months of this reposeful existence the family wakes up, shakes itself, goes out to see if the grass is growing, and by and by sets to work at summer tasks. The country remains comparatively lively till the following winter, when again all signs of life disappear and all is silent, except we presume for the snores of the sleepers. This winter sleep is called "lotska."

NEW PUBLICATIONS.

A TEXT-BOOK OF MEDICAL TREATMENT.

This is the work by an English writer in an order of text-books of which there are several well known examples in American medical literature. It is an attempt to place the science of treatment before the medical practitioner in such a form as will allow him to bridge the gap which often exists between his knowledge of the theory of disease and the application of treatment to the disease at the bedside. The links between physiology and pathology, between pharmacology and therapeu ics, are not always readily apparent, and difficulty is often experienced in regarding treatment from a new point of view. The sequence of the chapters in the present work rests chiefly on an anatomical and physiological basis. Under the heading of different diseases, symptoms are mentioned which afford indications for treatment. The treatment is varied and complete, and the formulæ have been adapted to the standard of the American Pharmacopœia. The work is in a clear and lucid style, characteristic of English medical writers. The author is undoubtedly a man of broad vision and extended experience, and he discusses his subject in an attractive and instructive manner. The work will undoubtedly meet with success, and will be found of use to all members of the medical profession.

A Text-book of the Medical Treatment of Diseases and Symptoms. By Nestor Tirard, M.D. Lond., F.R.C.P. Adapted to the United States Pharmacopœia by E. Quin Thornton, M.D. Philadelphia and New York: Lea Brothers & Co., 1900.

HARE'S TEXT-BOOK OF PRACTICAL THERAPEUTICS.

The popularity of this text-book is recorded in the large number of editions which have been demanded during the last nine years. The author has taken every occasion of the publication of a new edition to revise his work, and every section is accordingly brought up to date in conformity with the most recent discoveries from the physiological or pharmaceutical laboratories. The perusal of this work will convince the reader of the foolishness of the idea that general therapeutics as a science is not advancing with such rapidity as pathology or therapeutics. The student will probably find this one of the most valuable manuals of the essentials of materia medica which he can possess, and nothing but a continuation of its popularity can be predicted for it.

A Text-book of Practical Therapeutics. With Especial Reference to the Application of Remedial Measures to Disease and Their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With Special Chapters by Drs. G. E. de Schweinitz, Edward Martin, and Barton C. Hirst. New (8th) Edition. In One Octavo Volume of 796 Pages, with 37 Engravings and 3 Colored Plates. Cloth, $4.00; leather, $5.00, net. Philadelphia and New York: Lea Brothers & Co.

TRANSACTIONS OF THE ROYAL ACADEMY OF MEDICINE IN IRELAND.

The Transactions of this society contain the usual number of excellent and interesting papers. The present number is admirably illustrated, and many of the contributions will be found to more than repay passing perusal.

Transactions of the Royal Academy of Medicine in Ireland. Volume XVII. Edited by John B. Story, M.B., F.R.C.S., etc. Fannin & Co., Ltd., 41 Grafton Street, Dublin; Bailliere, Tindall & Cox, London; James Thin, Edinburgh; John Wright & Co., Bristol. 1899.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Hints.

The July issue of the *International Journal of Surgery* contains the following timely hints:

Always examine for lice the heads of children with enlargement of the cervical glands. There are many such cases in which a close hair-cut and the application of larkspur or of black wash to the scalp will cure the neck.

Don't use the Trendelenburg position too liberally on very fat patients. The abdominal contents, which are heavier than usual through the presence of an excess of fat, press hard upon the diaphragm and interfere much with the breathing.

There is every evidence to show that respiratory failure is the principal cause of deaths occurring under the influence of anesthetics, and hence artificial respiration is the chief remedy, and must be persisted in, whether or not you also use other means of restoring the patient to consciousness.

In applying ligatures, if the object is to occlude a vessel and prevent hemorrhage, or to strangulate tissues, as in some operations for piles, they should be tightly applied. Whenever they are used for sutures, however, all that we want is approximation, and any degree of force which constricts or strangulates the tissues is harmful and misapplied.

Myomata which develop before the change of life, and which give rise to no hemorrhage or disagreeable pressure symptoms, had better be left alone. On the other hand, those which develop after the change of life are prone to malignant degeneration, and their removal is usually advisable, even if they give rise to no specially unfavorable symptoms.

A Case of Hat-pin in the Urethra.

W. Launcelot Brown (*New York Medical Journal*, July 7, 1900) reports the following case:

The patient, Polish, seventy-five years of age, married, was admitted to Cook County Hospital February 9, 1898, at 2.55 P.M., with the following history: He said that three days before he could not urinate, and passed a lady's hat-pin, head first, into his urethra. It slipped from his grasp, and he was unable again to get hold of it. He later

succeeded in passing water, but had since suffered great pain. General examination was negative. His mind was clear. In the urethra or penis behind the scrotum could be felt a hard body, which caused pain upon being manipulated. This could be traced into the bladder. Owing to the depth and extreme sensitiveness, ether was administered at once, and after shaving and surgical cleansing, a median incision half an inch long at the base of the scrotum, directly over the point of the pin, was made, the point grasped by forceps, and extraction effected without difficulty, it being proved that the head was in the bladder.

This very small wound was simply closed by two silkworm-gut sutures, catching and approximating the walls of the urethra, but not perforating them.

Powder dressing, but no drainage by catheter. He had no trouble in urinating while in the hospital, and was discharged five days later in as good health as before the accident. He had no fever before or after the operation. He could not speak English, and the history was obtained through an interpreter.

Fistula in Ano: Its Relation to Phthisis.

S. G. Gant (*Medical Record*, July 7, 1900) in discussing the relation of fistula in ano to phthisis says:

Tuberculous fistula of the anus is usually secondary to tuberculous disease of the lungs.

Pulmonary phthisis is rarely, if ever, secondary to fistula in ano, either before or after operation.

Tuberculosis of the anal region should be dealt with radically, as is recommended when it attacks other parts.

When the patient's general condition will permit we should operate on all fistulæ irrespective of the kind.

We should not refuse to operate on persons suffering from a mild form of phthisis, nor on those who give a family history of tuberculosis. Certainly, if we arrest one destructive process, nature is all the more capable of dealing with the other.

The author believes that those patients operated upon for tuberculous fistula and those that are non-tuberculous complicated by phthisis, who rapidly decline and die, do so as the result of an inflammation of the lungs induced by the anesthetic, especially ether. Such accidents have not followed any of the operations which he has made under local anesthesia.

Lastly, Gant believes we are justified in discarding the erroneous teachings of writers who believe that the cure of a fistula will result in a development of phthisis.

Treatment of Torticollis.

At the meeting of the Section on Orthopedic Surgery of the New York Academy of Medicine, held April 20, 1900, Dr. Townsend (*Medical Review of Reviews*, July, 1900) presented a girl twelve years old who had been relieved of torticollis, the result of suppurative cervical adenitis at the age of five, which had produced cicatricial adhesion to the left sternocleidomastoid muscle. The head had been pulled over toward the left shoulder, and the deformity had been increasing for four or five years. On February 1, 1900, an open incision one and a half inches long, about two inches above the clavicle over the belly of the muscle, and free section of all the resisting structures, had relieved the deformity. The head had been held in the opposite position by plaster bandages. There had been no pain, the temperature had never been above 99°, and the wound healed by primary union. The result was satisfactory. The head was in good position with motion. A little gap was felt below the scar, but the muscle had probably united. Subcutaneous tenotomy was impossible, as it would have been necessary to carry the incision to a point where no one would have dared to go. In general he prefers the open incision for division of this muscle.

In the discussion following the presentation of the case Dr. R. A. Hibbs commended the open incision. In a recent division of all contractions, correction of the secondary distortion by vigorous manipulation, fixation for a time in the overcorrected position by a plaster bandage, and after-treatment by proper exercises, would secure good results without the subsequent use of apparatus.

Prostatic Hemorrhage.

Guyon (*Rev. de Thér.*, June 15, 1900, p. 420) believes that hemorrhage of the prostate is exceptional in young people, and occurs mostly after middle age. Here it may be due to some new growth in the organ, and oftener still to hypertrophic changes, in which case even a carefully manipulated soft sound sometimes causes very serious hemorrhage. Spontaneous bleeding is mostly due to the presence of a neoplasm, and occurs either in the form of urethrorrhagia or of hematuria proper, which in turn may be initial (noticeable at the beginning only of micturition), yet in many cases turns out to be total, extending over the whole act.

In a patient subject to slight prostatic hemorrhage, the passing of a No. 18 or 20 sound of the French scale will produce initial and terminal bleeding, while in more severe cases the same occurrence may be noticed during the course of vesical lavage only.

The main complication to be feared is a retention of blood and urine, which should be met by the introduction of a sound left *in situ*, the flow to be regulated with borated injections. Considerable hemorrhage with retention should be treated by aspiration of the clots and the placing of a sound as indicated above.

Intracranial Pressure.

W. N. Bullard (*Journal of the American Medical Association*, June 30, 1900) says that there exist certain non traumatic cases of increased intracranial pressure of unknown or doubtful origin.

Whenever such an excess of intracranial pressure exists as to cause serious symptoms, the question of its relief by opening the cranium and cutting the dura should always be considered.

In certain non-traumatic cases of excessive intracranial pressure, more or less permanent relief — or even cure — may be obtained by proper surgical interference.

In cases of acute severe optic neuritis of unknown origin, the question of opening the cranium and relieving the excessive intracranial pressure should be considered.

A Study of Twenty four Cases of Typhoid Fever with Symptoms of Peritoneal Infection; Laparotomy.

G. B. Shattuck, J. C. Warren, and F. Cobb (*Boston Medical and Surgical Journal*, June 28, 1900) present an exhaustive report of twenty-four laparotomies in typhoid fever. Of these six recovered. They conclude among other things: (1) In the majority of mild cases beginning infection (whether from perforation or not) is marked by comparatively slight symptoms, local pain, tenderness, spasm, and leucocytosis; (2) complaint of abdominal pain in a case of typhoid should always lead to a suspicion of beginning peritoneal infection; (3) frequent leucocyte counts are needed in every case of typhoid. In the presence of abdominal pain an hourly count is necessary.

MEDICINE.

Experimental and Clinical Notes on the Subarachnoid Space.

From the work done by D. Tait and G. Caglieri (*Journal of the American Medical Association*, July 7, 1900) the following conclusions have been drawn:

1. To the already known practical routes leading to the sub-

arachnoid space we propose to add the "low cervical"—in the sixth cervical space—which we find both easy and safe.

2. The cerebrospinal fluid possesses none of the properties of lymph.

3. Contrary to the classic opinion, the cerebral perivascular lymphatic sheaths do not empty into the subarachnoid space (Sicard).

4. Liquids injected by lumbar puncture diffuse rapidly toward the different cavities of the brain, and subsequently reach the cortex.

5. The difference in osmotic currents in the cerebrospinal fluid—presence of exosmosis and absence of endosmosis—in addition to the protection afforded by the perivascular lymphatic sheaths, explains the rarity of infection of the cerebrospinal fluid in the course of generalized blood infections, and also the gravity of primary infections of the cerebrospinal fluid (Sicard).

6. Direct intramedullary medication is feasible and deserving of further trial.

7. Subarachnoid injections of cocaine are devoid of danger if made with certain precautions. The solution should be freshly prepared and injected slowly at a temperature of 37° C., and never in a greater quantity than three cubic centimeters.

8. The extent and duration of the analgesia thus induced is generally in direct proportion to the amount of drug injected. Analgesia is noted in some cases as early as five minutes after the injection, and in others, for unknown reasons, as late as thirty-five minutes. Its duration is sufficient for the performance of all operations on the lower limbs and pelvis, and may be sufficient to be of service in obstetrics.

9. The disagreeable effects (headache and vomiting) sometimes noted after these injections are partly due to the sudden increase of pressure in the subarachnoid space (too rapid diffusion toward the brain), and principally to the amount of cocaine used. These post-operative symptoms are never alarming or lasting. They recall the effects of intradermic injections of cocaine, and never resemble in severity the symptoms so frequently observed during and after chloroform or ether anesthesia.

10. One cubic centimeter of a one-per-cent solution of cocaine injected slowly is generally sufficient for all practical purposes, and is not followed by untoward symptoms.

11. For obvious reasons it is a good plan to withdraw a small amount of cerebrospinal fluid prior to making an injection.

12. To the careful surgeon who aims to gradually divorce himself from the dangers of general anesthesia and the limitations of superficial analgesia, spinal analgesia may, under certain exceptional con-

ditions, prove of signal service, and it behooves us to herald abroad the fact that this progressive step was made by a modest American surgeon—J. Leonard Corning.

Examination of the Blood: Its Value to the General Practitioner.

At the recent meeting of the American Medical Association, M. Howard Fussell read a paper on this subject in the Section of Practice of Medicine. He said that in some cases the blood examination is as important as, and in other cases it is more important than, the examination of the urine, and it is already acknowledged that an examination of the urine is necessary in every case. As a general practice the author examines the blood in all obscure cases. As a result of such an examination: (1) The physician will avoid administering iron to a patient because the face is pale, since all pale people are not anemic. (2) It will be found that patients with flushed faces often have decided reduction of the hemoglobin and of the number of red blood-corpuscles. (3) Patients with cardiac and pulmonary symptoms are sometimes diagnosed as cases of organic disease, when a blood examination would reveal chlorosis. (4) Blood examination will positively indicate the presence or absence of malaria. (5) The diagnosis between leucemia and other organic conditions, such as tuberculosis and carcinoma of the stomach, may be made. (6) The blood examination combined with the Widal test will diagnose between typhoid fever and malaria; or, possibly, show a combination of the two diseases. (7) Counting the leucocytes will often give satisfactory results in clearing up obscure conditions. The physician does not need to take a microscope to the bedside of the patient; if the diluting tube is surrounded by a rubber band the blood may be preserved for a long time, and the counting may be done at leisure.

Contribution to Our Knowledge of Uric Acid Salts.

F. W. Tunnicleffe and O. Rosenheim (*Lancet*, June 16, 1900) say there is no evidence of the existence of a third order of uric acid salts —*i.e.*, quadriurates—either in the artificial or natural amorphous urinary deposits or in the fluids of the body. Under these circumstances they regard it advisable to discontinue the use of the term "quadriurate."

The substances obtained artificially under the conditions supposed to produce quadriurates consist of mixtures in varying proportions of uric acid and biurates, or of pure uric acid or pure biurates alone.

Natural amorphous urinary deposits consist of a mixture of uric

acid with urates of sodium, ammonium, potassium, calcium, and magnesium (containing in most cases in addition phosphoric acid).

The property of some natural and artificial amorphous urates of showing the formation of uric acid crystals under the influence of water is due to the dissolving out of the more soluble biurate moiety and a change in physical state of the remaining uric acid.

Any theory concerning the pathology or treatment of gout or the uric acid diathesis built upon the assumption of the existence of quadriurates requires reconsideration.

The existence of two forms of uric acid (the tautomeric lactam and lactim forms) may explain the variation in the physical and physiological behavior of this acid and its salts.

Inebriate Criminals and Their Treatment.

T. D. Crothers (*Alienist and Neurologist*, July, 1900), in discussing the treatment of inebriate criminals, says that this class of criminals is numerous and is generally studied as types of all others; and unfortunately they furnish the basis upon which much of the literature of inebriety is founded. They are composed of several classes more or less distinct, requiring a comprehensive study of conditions and surroundings. As patients in inebriate asylums they are extremely difficult to manage, often bringing odium upon the asylum and receiving little benefit from it. In the treatment they should be classified and put under a strict military discipline in which labor is a part of the treatment, and thus continued for months and years. A removal of this class in our asylums will increase the percentage of recoveries largely; also a more thorough study of the different classes of inebriety will reveal many facts that will clear away much of the confusion at present existing.

The Etiology of Morbus Basedowii.

At a recent meeting of the Vienna Society of Physicians, Brewer (*Medical Press*, July 4, 1900) read a paper on the various causes and origin of Basedowii. He pointed out that he has for a long time believed in Moebius's theory that the primary cause is due to an altered or hyperexcited secretion of the gland which results in hypertrophy. He is personally inclined to believe in many other causes. He has seen a perfectly healthy person acquire the typical disease after having a small abscess over the region of the gland.

The author related the history of ten cases occurring in old people and young females, whom he had treated for struma with the iodide of potassium, and who subsequently passed through all the complex

symptoms of morbus Basedowii. Some of them had previously suffered from the disease and had been cured, but many of them had always been healthy and never suffered from the malady.

Gaseous Gangrene.

Muscatello (*Riforma Medica*, May 21, 22, 23, 1900), as the result of a research on the above subject, finds that gaseous gangrene may be produced by various microorganisms, particularly, however, by the bacillus aerogenes capsulatus, which, without having a specific action, behaves in man as a toxin saprophyte upon tissues already seriously damaged. The bacillus coli communis, with other germs, may also cause gaseous gangrene. It is not essential that the patients should be diabetic. Clinically two forms may be distinguished: (1) due to the bacillus aerogenes capsulatus pure—this never shows inflammatory phenomena and exhibits little tendency to spread; (2) due to mixed infection—this is more inflammatory and tends to spread. In treatment, free opening, with early removal of all the dead parts and energetic disinfection, may in a number of cases bring about a cure.

Adenitis in Scarlet Fever.

Stembo, of Wilna (*Deutsche Med. Woch.*, May 31, 1900, p. 355), notices the frequent occurrence of adenitis as a premonitory symptom of scarlatinal nephritis, a circumstance which had already been demonstrated by Leichtenstern. Enlargement of the lymphatic glands and irregularities of the thermometric curve precede within a few days the appearance of albumin and casts in the urine, while a decrease in the glandular swelling coincides with a subsequent improvement in the nephritic inflammation. During the recent epidemic of scarlet fever, which in Wilna lasted from September, 1897, to January, 1899, Stembo found occasion to notice a complete correlation between the character of these glandular enlargements and the intensity of the renal complications.

A New Symptom of Enteroptosis.

Reynier, of Paris (*Revue Médicale*, Montreal, No. 48, 1900, p. 379), calls attention to the symptoms of ptosis of the large intestine, among which he numbers a tender spot located in the left hypochondrium at the point of the floating ribs on a level with the waist, and at the angle which the transverse colon describes with the descending colon. The painful sensation disappears during recumbency and by the emis-

sion of flatus, and recurs on rising, being especially noticeable toward evening. Pain increases upon pressure, and induces men to loosen their suspenders, women to dispense with the corset. It is not of a neuralgic nature, and Reynier ascribes it to gastric dilatation and enteroptosis. Treatment should be directed to the dilatation and the constipation. Massage is beneficial.

Rupture of the Spleen in Typhoid Fever.

Aaser has reported (*Tidskrift for den Norske Laegeforening*) a peculiar case in which this accident occurred. A typhoid patient of Straefling, who was being conveyed in a carriage to the hospital, suddenly jumped out to the ground. Two hours later collapse occurred, and death. At the post-mortem a very broad tear of the spleen was found. Evidently the patient's leap had produced a shock sufficient to rupture the capsule of the greatly swollen spleen.—*Centralbl. für Innere Med.*, No. 22, 1900.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

Preliminary Report on the Presence and Nature of Parasitic Amebæ (Cancriamœba Macroglossa) in the Epithelial Carcinomata.

Gustav Eisen (*Medical Record*, July 7, 1900) in a very interesting article on this subject summarizes the results of his researches as follows:

1. A parasitic ameba (*Cancriamœba macroglossa*) is found in all epithelial carcinomata. This ameba may be readily fixed while in action if the tissue is fixed while yet warm, the lowering of the temperature below that of the blood causing the ameba to contract.

2. The cancriamebæ are the cause of the characteristic structure of epithelial carcinomata in which are found cell nests or cell plugs. In each such nest we can always distinguish two distinct parts—an inner core or ameba nest consisting mainly of one or many cancriamebæ mixed with some leucocytes and loose epithelial cells, and an outer zone consisting of epithelial cells, the inner ones of which are flattened, concave, and in section lunate, while the outer ones are normal.

3. The peculiar structure of these cancer plugs is caused by the

effort of the epithelial cells of the infected locality of the human body to fence in the amebæ and prevent them from spreading through the tissue. This effort is also more or less successfully accomplished by an enormous increase in epithelial cells and by a chitinization of the cells nearest the cancriamebæ. The concentric structure of the cancer plug is the result of the pressure on the epithelial cells caused by the cancriamebæ situated in the center of the cancer plug through continuous increase in number and size.

4. A constant struggle is going on between the cancriamebæ and the epithelial cells. The latter are trying to fence in the amebæ and to kill them by encysting or by chitinization, while the amebæ on their side feed on the epithelial cells by projecting pseudopodia into the cells and sucking out their cytoplasm. The cancriamebæ are not caryophagues.

5. The propagation of the cancriamebæ is by spores and by amitotic division. Mitotic division has not been observed. There are numerous cells in mitotic division all through the tissue, but these cells seem to be exclusively epithelial cells.

6. The cancriamebæ are nearly always found surrounded by a small vacuole. This vacuole is the result of the destruction of one or more epithelial cells by the parasites. The vacuole becomes gradually larger as more and more cells are destroyed, until finally when the epithelial cell fence gives way and breaks up a large pus cavity is formed, containing cancriamebæ, fragments of epithelial cells, and leucocytes.

7. The cancriamebæ are distinguished from all leucocytes by their larger size. While the leucocytes seldom reach 10 to 12 μ in diameter, the cancriamebæ frequently exceed 25 to 30 μ in length. Many of the cancriamebæ possess a vacuole, an organ never found in the leucocyte.

8. The acute sensitiveness to cold suggests the treatment of carcinomata by freezing.

THERAPEUTICS.

Salol Concretions in the Stools.

Leo (*Deutsche Med. Woch.*, May 24, p. 123) reports the case of a patient suffering from chronic enteritis who daily took several grammes of salol until he passed *per anum* some concretions which were taken at first for pancreatic calculi, but on chemical analysis proved to be composed of organic substance and salol.

Salol dissolves at 43° C., but if kept for several hours at 40° (104°

F.), and even at 37° (98.6° F.), it coalesces and evinces a tendency to granulate.

In view of Nencki's discovery that salol introduced into the bowels decomposes into carbolic and salicylic acids under the combined influence of alkaline pancreatic secretion and intestinal microorganisms, the question arises as to why such concretions could appear in the feces. This may be due to two causes: either the amount of salol subject to such decomposition is limited and the surplus evacuated with the salol, or else—a fact which may prove of considerable diagnostic importance—the appearance of salol may hinge upon existing pancreatic disease with temporary suppression of the secretion, thus allowing the drug to pass the intestine in its natural unaltered state.

A Discussion on the Treatment of Diphtheria.

E. G. Wood (*Southern Practitioner*, vol. xxii, No. 1) summarizes his ideas as follows:

1. Antitoxin, properly administered, has a specific effect on diphtheria.

2. Serum therapy materially shortens the duration of diphtheria and reduces the mortality at least one-half, not only in pharyngeal and nasal cases, but likewise in laryngeal diphtheria.

3. The earlier it is administered the better are the results obtained.

4. It is doubtful if it reduces the percentage of cases of paralysis unless it is given in the first two days of the attack.

5. One large initial dose is productive of better results than repeated small ones.

6. Antitoxin should be administered as soon as the clinical diagnosis is made.

7. It is practically harmless.

8. It is of no value in streptococcus sore throat.

9. The immunity conferred on healthy persons lasts about one month.

The Bromides in Epilepsy.

De Fleury (Soc. de Thérap., Paris; *Munch. Med. Woch*, No. 22, p. 785) indicates a preference for the use of strontium or sodium bromide, exhibited after Richet and Toulouse's "metatrophic" method (avoidance of sodium chloride in the patient's diet), and reports extraordinary success, insomuch as the amount of bromides could be reduced to one-half or one-third of the usual dose. The bromides should be exhibited during meals and divided in at least four daily doses. In conjunction

with the metatrophic diet de Fleury recommends salt-water injections. The usual plan is to subject his patients to rigid enforcement of the special diet for from four to six weeks, after which time the treatment is continued with frictions, douches, salt-water baths, and massage, in conjunction with bromides in very reduced dosage. The salt-water injections bring about a most noticeable improvement of the patient's moral condition, while the continued use of large doses of bromides alone produces exactly opposite results.

Treatment of Hematuria with Gelatin.

Dr. Schwabe (*Therapeutische Monatshefte*, 1900, No. 6) says that by Carno in 1896, and after him by Dastre and Florensce, in France, the hemostatic action of gelatin was noticed. Later Lancereaux used gelatin in the treatment of aneurisms. The provings of the gelatin therapy have up to date shown favorable results, and indications for the same are becoming more extended; as a result tampons of gelatin are used even in local bleeding, and have proven to be very reliable. Schwabe reports a case of hemorrhagic nephritis accompanied by severe hemorrhage from the kidneys in which the gelatin was very efficacious. He used hypodermically in the usual combination 25 cubic centimeters, which he injected under each clavicle. He also allowed the patient to take half a liter of ten-per-cent solution of gelatin daily for eight days. On the eighth day all red blood-corpuscles had disappeared from the urine.

Arsenic in Scarlet Fever.

Semtschenko has experimented with arsenic, exhibited in cases of scarlet fever, according to the plan advocated by Speransky, and reports very favorable results from the use of Fowler's solution given in from one-fourth- to one-drop doses, according to the patient's age. He noted a decrease in the virulence of the disease, the absence of serious complications, but was unable to confirm the prophylactic efficiency which has been claimed by Speransky for arsenic in scarlet fever cases.

The Thyroid in Infectious Diseases.

Tossi (*Il Policlinico*, April 15, 1900) finds that in pneumonia there is an abundant hypersecretion of colloid substance as a rule; in some cases, however, increased epithelial proliferation is noted instead. In typhoid the most marked feature is the increase in colloid substance, but here, also, occasionally a marked proliferation of epithelium takes

place. In some cases the interstitial connective tissue is increased. In three cases of septicemia the thyroid showed increased activity either by epithelial proliferation, new formation of follicles, or increase in colloid substance. In tuberculosis, on the other hand, there is a noticeable increase in the formation of follicles and in epithelial proliferation.

Igazol.

Savella (*Therap. Monatsh.*, 1900, No. 6) recommends igazol, which is a powder formed of a combination of formaldehyde and trioxymethylen with an iodine base, in the treatment of tuberculosis. The remedy is used in a steam atomizer, the steam being inhaled by the patient. Savella claims for his new treatment that within two months, out of twenty-six patients affected with lung trouble treated by this method, ten were cured, nine nearly so, and two signally improved.

Hedonal.

A. Eulenberg (*Deutsche Med. Woch.*, 1900, No. 23) says that hedonal, a derivative of urethane, is to be recommended as a hypnotic in the sleeplessness of neurasthenia. It is best given in powder form in doses of 15 grains, or in combination, 15 grains of hedonal with 30 grains of trional. On account of its bitter taste it is best given in a teaspoonful of cinnamon water, to which may be added a few drops of oil of orange. Injurious after effects were not noticed.

PEDIATRICS.

UNDER THE DIRECTION OF CHARLES G. JENNINGS, M.D.,
Professor of Practice of Medicine and Clinical Diseases of Children, Detroit College of Medicine.

The Feeding of Infants.

Keller (*Centralbl. f. Inn. Med.*, April 21, 1900) opposes the old view that infants in the first year of life should be fed every two hours. Luckily very few mothers actually feed their children so often, unless they are ill. In the Breslau Children's Clinic no infant, whether healthy or diseased, receives more than five feeds in the twenty-four hours, the interval between each being four to five hours. The results as regards nutrition are excellent, and the children soon become contented and used to the new regimen. Some experiments of Keller's showed that the absorption and retention of nitrogen and

phosphorus, and therefore the assimilation of albumens, were uninfluenced by the length of the intervals, whether two or four hours, between the feeds. He interprets this to mean not that the length of the intervals is immaterial, but that rules for feeding intervals should be made almost exclusively from clinical observation. In foundling hospitals and large institutions there is always more illness if the shorter intervals are the rule than when longer ones are adopted. Czerny found that neither the fact that the stomach was empty nor that it was possible to make the child suck were any indications for the giving of nourishment. The healthy stomach of a breast-fed infant is empty one and a half to two hours after a feed, but free HCl is not found till one and a quarter hours later. In an infant fed on cow's milk under physiological conditions three hours at least is required for the emptying of the stomach, and two more for the appearance of free HCl. Czerny therefore fixes the minimum interval between the feeds at three hours for breast-fed and four hours for bottle-fed babies. If the stomach is constantly overloaded the reaction, showing free HCl, and the motor function both decrease. In disease remnants are found in the stomach four or even five hours after a feed, and no free HCl can be detected. This proves that a certain time during which the stomach is empty is even more necessary for an ailing child than for a healthy one, if the gastric, motor, and secretory functions are to be maintained. Although little importance is now attributed to gastric digestion, Pavlow's researches have proved that the excretion and composition of gastric juice influences the properties of all the other digestive excretions. It is therefore evident to what an extent digestion and assimilation are inhibited when, two hours after a feed, fresh nourishment is introduced into the stomach of an ailing infant in which no free hydrochloric acid is present.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Common but Generally Unrecognized Symptoms of Eye-strain.

Starr (*Journal of the American Medical Association*, July 7, 1900) calls attention to frequent symptoms of eye-strain other than headache. One of the most common of these is pain in the back of the head. This sensation is often described as a pulling or drawing, or a tense feeling. The pain, radiating down the back and to the shoulder, is frequently mistaken for rheumatism. He considers this condition

as almost pathognomonic of eye strain, as it is frequent in about eighty per cent of all cases of refractive error presenting themselves.

Another symptom which he classes under this head is mental confusion, or confusion of ideas, or an inability to fix the attention upon a particular object of thought without great effort. Patients not infrequently speak of this symptom, and observe that it is more troublesome the more the use of the eyes is demanded in the performance of their task.

Closely allied to this condition of disturbed mental processes, and possibly in part depending upon it, is mental inaptitude or backwardness in children. He also mentions as probably the most frequent of all the results of eye-strain disturbances of the digestive apparatus.

Starr gives the histories of a number of cases in illustration of the foregoing, and the prompt and permanent relief following the correction of errors of refraction.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Extemporaneous Forced Abortion.

Merle (*L'Obstetrique*, May 15, 1900) refers especially to abortion undertaken for pernicious vomiting of pregnancy. The mortality of this affection has been placed as high as eighty per cent by authors. Therefore the consultant may feel it his duty to operate at once to conserve life.

Cases are reported, personal and miscellaneous, after which the author gives his rules for operative procedure as follows:

1. Give chloroform (this, he admits, is not in accord with the opinions of some authors).

2. Observe all antiseptic precautions. Place the woman in the obstetrical position. Seize the lower lip of the cervix with forceps and draw it down to the vulva. Let an assistant hold the forceps.

3. Apply the left hand to the uterus, through the abdominal wall. With the right hand introduce Hegar's dilators in succession up to Nos. 22 and 24.

4. When dilatation is sufficient introduce a finger in the uterus, or, if necessary, two fingers; rupture the bag of waters, peel off the ovum whole; break up the ovum with the fingers after Caruso's method, and extract it together with the membranes.

5. Reintroduce the finger to make sure that the uterus is empty, removing any bits of placenta or membrane remaining.

6. Introduce a hard swab dipped in a solution of sublimate, and swab out the uterine walls.

7. End the intervention by an intra uterine douche of weak sublimate solution, followed by one of simple boiled water. Finally, tampon with iodoform gauze.

Even in the most desperate cases this operation appears to have been well borne.

The author appends a few conclusions to his paper, which have reference to parts of his technique. Dilatation must be made with metallic apparatus, and the preference is given to Hegar's graduated instruments. The ovum is best extracted by the finger; only exceptionally should the curette be used.

When the swab is to be used a good antiseptic in which to dip it is creosote-glycerin.

The author states that thus executed abortion becomes a simple operation, easily done, certain in results, and devoid of danger.

Conservative Surgical Treatment of Uterine Myomata.

At the recent meeting of the Berlin Surgical Congress (*Medical Press*, June 20, 1900) Professor Olshausen read a paper under this title. He considers it necessary for the surgeon to limit his operation as much as possible, and especially to remove no parts of the organism the taking away of which is not absolutely necessary. This limit is not always adhered to. When the uterus is extirpated surgeons think the ovaries are of no further use. The removal of normal ovaries is not an indifferent operation, for the consequences of such removal are very disagreeable. Removal of the uterus gives no sign of its loss, but this is not the case with the ovaries when removed before the menopause. This is an important point for those who have the welfare of their patients at heart. It is not the cessation of the monthly flow that embitters the lives of many patients, but the loss of function of the ovaries. For this reason he has for a long time left the ovaries in cases of amputation of the uterus for myoma. The operation is rendered more difficult, but it is more advantageous to the patient. From similar consideration in myoma of the cervix he leaves the body of the uterus along with the ovaries. Some months ago a lady of thirty came under his treatment for profuse hemorrhage. Examination showed just beyond the introitus a cervix enormously enlarged by a myoma larger than an ostrich egg. There was no tumor above the cervix. The speaker operated from the vagina,

cutting the cervix across laterally, enucleated the tumor, and sutured the body of the uterus into the vaginal opening. The tumor weighed 1250 grammes. The patient was discharged on the twenty-second day.

Simple enucleation is only justifiable in case of solitary myoma. Out of 207 operations for myoma during the last three years, twenty-nine enucleations have been performed with retention of the genital organs. This deserves more consideration on the part of operators. It is true that the radical operation has become far less dangerous, but carefully performed enucleations are not dangerous. Lately he enucleated where there were several myomata, and left some small ones —*i.e.*, in women over forty—when they would not grow. In younger women also he has operated conservatively when there was a possibility of their having children. After enucleation the very irregular bed from which the myoma has been shelled out should be carefully sutured.

The speaker then turned to the question of how far myomata in general require surgical interference. Some statistics give the percentage at forty-two. He himself, who only operated when the symptoms were serious, had become more and more conservative as years went on, and out of his last 320 cases he only operated in fifty-three, or in 16½ per cent of the cases.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Lecturer on Dermatology, Detroit College of Medicine.

Some Clinical Observations on Lupus Erythematosus.

J. A. Fordyce and O. H. Holder (*Medical Record*, July 14, 1900) say in part that in lupus erythematosus we have a chronic inflammation of peculiar type, which in the early stages of the affection appears to be exclusively confined to the small vessels of the upper and middle regions of the derma. In its later stages the connective tissue undergoes a peculiar degeneration leading to a superficial but pronounced atrophy of the skin, the leading clinical feature of the disease. The negative results which have followed attempts to find a local bacterial agent, as well as the failure of repeated culture and inoculation experiments, have led many clinical observers to the opinion that we have to do with a toxic agent which is carried by the blood-current from some extra-cutaneous focus. The resemblance of lupus erythematosus to lupus vulgaris in its gross clinical features led

many of the older dermatologists to regard them as closely allied processes, if not actually identical. A more careful clinical as well as microscopical study of the two affections, however, showed them to differ in so many respects that they were, with few exceptions, looked upon as totally dissimilar diseases.

The fact that lupus erythematosus is at times associated with tuberculosis of the lymph nodes, the lungs, or other visceral tuberculosis, has prevented Hutchinson, Besnier, and others from accepting the view, until lately almost universally held in Germany, that they are in no respect related. Besnier and the majority of the French school uphold in the most emphatic manner the close relationship of the affection to the tuberculous process.

The etiology of lupus erythematosus throws almost no light upon the pathology, two conditions only appearing to hold antecedent relations with the disease. One of these, a local injury of the corium, includes cases which have been reported to have followed frost-bites and tattooing. The other is tuberculosis. In the last two years three cases in the first group have come under the authors' observation—two of frost-bite, and a third rather vague case which followed scarification for rosacea. Of the second group, they have one in which there was no uncertainty of coexisting tuberculosis. This was the telangiectatic case which came to autopsy. Five others complete their list. In these no special examination of the lungs was recorded, but granting them all to be tuberculous, the list shows no such percentage as that of the French school. So uniformly do their records run that it is not out of place to bring up a possible solution of the actions of toxin. If anything is absolutely known about lupus erythematosus, it is that Koch's bacillus is not present in its lesion, and that the disease is not true tuberculosis of the skin. Were it possible to establish the chain by which remote foci can act through the blood-current, the long record of cases in France becomes of great interest and importance. The link in this chain is commonly ascribed to the stimulation or paralysis of the vasomotor centers, or to the direct action of the soluble poison on the walls of the vessels. Both these ideas are unanswerable, for pathological anatomy can neither indorse nor refute them, and it is not unlikely that they may always remain to explain in a vague way the existence of many of the erythemata and general tuberculides. Lupus erythematosus is too local a process to be attributed to a chemical disturbance of the vessel wall, for all the vessels of the skin must be subjected simultaneously to an identical action, and they show no sign of it. To the early observation of the skin the vasomotor theory of the physiologists and the allied theories of pathology owe in part their existence.

THE MEDICAL AGE

VOL. XVIII. DETROIT, AUGUST 10, 1900. No. 15.

ORIGINAL CONTRIBUTIONS.

FRACTURES OF THE VERTEX AND LATERAL REGIONS OF THE SKULL, WITH REPORT OF CASES.*

BY ANGUS MC LEAN, M.D., DETROIT, MICH.,

Surgeon, Harper Hospital, etc.

Fractures of the vault of the skull are invariably due to direct violence. The bones forming this portion of the cranium are not heavily covered with soft tissue; the vertex is protected by the scalp only, and the upper portions of the lateral regions by the scalp and temporal muscles and fasciæ. The base of the cranium is well guarded by the face and muscles of the neck, and very rarely do we find a fracture of this region due to direct violence, except it be through the mouth or orbital cavities; therefore operative measures are not frequently called for in fractures of this portion of the skull.

Fractures of the cranium present an entirely different situation from fractures in other regions. They do not present any of the cardinal symptoms of simple fractures of the long bones; in these the symptoms are crepitus, deformity, and abnormal mobility. In simple fracture of the cranium none of these symptoms exist. Not only are the symptoms presented by these fractures widely different from fractures in other parts of the body, but the treatment required is also different.

The treatment of fractures in other portions of the body is to get the broken surfaces in apposition and retain them in this position until the continuity is restored, that the bone may again perform its function. For instance, in treating a fracture of one of the long bones of the extremity the aim is to restore the function of the bone, for without this is restored the limb is of little use.

In treating fractures of the cranium the aim is entirely different;

*Read before the Michigan State Medical Society, Mackinac, July 11, 1900.

restoration of the continuity of the bone is not essential for the function of the brain; for there are many cases on record where large portions of cranial wall have been removed without destroying the function of the cerebrum. The question then to be considered in these injuries is not how much the bone has been injured, but has the intracranial structure been injured, and has the bone been displaced sufficiently to press upon the cranial contents so as to interfere with its function?

The skull is a hollow globe, and that portion of its wall designated as the vault is made up of two layers of compact tissue, known as the inner and outer tables, with an intervening layer of cancellous tissue, the diploe. It has been demonstrated by Aran, Bruns, Rauber, Duret, and others, that the skull is elastic and capable of change in shape without breaking — that is, any of its diameters may be decreased while the opposing diameters would be increased. Its lateral diameter can be diminished on an average of fifteen millimeters before the elasticity is overcome and a fracture takes place. There may be produced a fracture of the outer or inner table without complete fracture of the bone.

The endocranial contents—meninges, vessels, cerebrospinal fluid, and nerve tissues — in the normal condition entirely fill the cranial cavity, and it is these structures that are disturbed when any violence is applied to the skull. When the cranial cavity changes its shape its contents must change their relations. If the pressure is applied gradually the cerebrospinal fluid is expelled into the spinal canal, a canal that allows of distention on account of its walls being composed partly of soft tissue; but if the violence is applied suddenly this does not have time to take place and takes part in the commotion. It is well known that we have concussion and contusion of the brain without fracture of the skull. Just where concussion ends and contusion begins is difficult to mark. Concussion is an old term that described a condition some modern writers have termed "cerebral shock;" then we may have concussion without contusion, but not contusion without concussion.

The strongest theories as to the cause of concussion are, first, that the vibration is transmitted to the brain, and secondly, that the fluid within the ventricles is forcibly displaced. The majority of authors do not believe that concussion of itself will cause death, but that contusion will; then we may have death from contusion of the brain without fracture of the skull. When death follows these injuries it is either due to general contusion of the brain, intracranial hemorrhage, or infection.

For description in this paper I will divide fractures of the vault into

simple non-depressed, simple depressed, compound non-depressed, compound depressed, and perforating. These can again be put into two classes — fractures that produce compression of the brain, and fractures that do not.

Simple non-depressed fractures cannot be positively diagnosed without incising the scalp, and they are often accompanied by the most serious brain lesions; the force that produces these is widely spread over the surface and causes a linear or fissure fracture. In these the entire diameter of the skull is forced in until its elasticity is overcome, and we have what is called by Messemer a "bursting fracture;" these fissures may extend across the whole vertex and down into the base, or run longitudinally or obliquely, depending upon the locality to which the force is applied, and the direction of least resistance. Although there is no displacement of bone a fissure fracture may be accompanied by general contusion of the brain with hemorrhage upon its surface or into the ventricles.

Simple depressed fractures are due to localized violence with some object with a rounded portion, one where a cap or hat protects the soft tissue: these are also found in young children. The space between the scalp and depressed surface of bone soon fills in with effusion, and there is an elevation instead of a depression present, resembling the effects of an ordinary contusion. Some difficulty may be experienced in detecting a depression with extravasation, but if pressure is applied for a few moments over the center of the elevation the effusion may be forced aside and the bone detected. A sterilized needle may be passed through the scalp, and the position of the bone detected by manipulating it. Two or three days after an injury of this kind the margin of the contusion becomes firmly infiltrated, and on palpation at this time this may be mistaken for the margin of a fracture, and should be borne in mind. If the depression is sufficient to produce a pressure over any of the cortical areas and the brain function is interfered with, the condition is definite.

Compound non-depressed fractures are accompanied by symptoms similar to simple non-depressed, with the addition of an external wound. This bone can be inspected through the wound and a positive diagnosis made. In these injuries there may be fracture of the inner table without the outer: this is a rare occurrence and cannot be diagnosed by any external palpation.

In a compound wound we are sure that we have one of the sources of danger present, an avenue of infection. The hair and scalp are not frequently washed, and so are splendid harbors for bacteria that immediately enter the wound. The hair should be shaved off for a considerable distance around the opening and the wound thoroughly

disinfected. These non-depressed fractures are usually of the "bursting" variety where the margins have temporarily opened, owing to the elasticity of the bones, and have sprung back into position; in regaining their positions hair and other substances may be caught between the margins, and should be removed; if necessary the outer plate of one margin may be chiseled away from the portion opposite the external wound, and the crevice disinfected before closing the wound.

Compound depressed fractures are usually circumscribed, comminuted, and cone-shaped, with the apex pressing on the diameter. If the violence has been more severe the broken portions of bone may be driven down into the endocranial tissue, producing a rupture of the meninges with contusion and laceration of the brain. In this there is a compound wound with displacement of bone; the wound must be disinfected and the fragments of bone removed. In all compound fractures with depression it is a good rule to remove the depressed portion; the trephine is not necessary for this, for there are usually points in which the chisel or forceps can be inserted and a fragment elevated; the other can be easily removed with forceps. More of the inner table than the outer is injured in these circumscribed fractures; this is due to its forming a smaller curve than the outer, and as the latter is forced upon the former it gives a larger base to the force applied. Careful examination of the inner border should be made after the fragments within sight are removed, for spiculæ from the internal plate may stick into the dura or protrude into the brain and give further trouble. The sharp points on the margins of the bone should be trimmed off with rongeur forceps.

When the meninges have been injured there may be hemorrhage present; if this is from the meningeal artery or its branches they can be ligated, but if it is from the pia it is not so easily controlled. If there is not hemorrhage beneath the dura it is better to leave it open and pack it lightly with gauze; if the dura is closed and hemorrhage goes on beneath it, the blood may follow the subarachnoid space and eventually produce a diffuse clot at the base. This gauze can be removed in twenty-four hours and the dura and external wound closed.

Penetrating fractures are always compound by gunshots, bayonets, knives, etc. Their treatment calls for disinfection and removal of any foreign body that can be discovered. If the external wound is not large enough for a thorough examination, it should be enlarged by rongeur forceps or trephine and the inner wound inspected, and any particle of foreign matter removed. These are frequently due to bullets and fragments of bone, or particles of clothing may be carried

along the bullet track; if the ball passes through the skull we have a perforating fracture. The inner table will show the greatest amount of injury at point of entrance, and the outer table at the point of exit. When the bullet lodges in the cavity it may be searched for by gentle probing. Large-tipped probes are used, some authors recommending a probe the size of the bullet; Fluhrer uses an aluminum probe, Fowler a graduated pressure probe, and Gircher the telephonic probe. Recently the Roentgen rays have afforded much aid in locating the missile.

When the ball can be located it should be removed, but where it cannot, tubular drainage should be inserted in the track for a distance to relieve the cavity of the exudate, for this may produce a pressure if it has no avenue of escape.

Case 1.—Mrs. H——, aged thirty-four, fell out of a window, striking on her head on the ground eight feet below. She was semiconscious when picked up, and was put to bed. She talked afterward and complained of pain in her head (right side), and was suffering from shock. About five hours later she became drowsy, and this was accompanied by paralysis of the left upper extremity.

A diagnosis of hemorrhage over the right cortical motor area was made. From the symptoms present the locality of the pressure was mapped out according to the rules of craniocerebral topography and the skull trephined. A fissure fracture had taken place and ruptured the middle meningeal artery, but not the dura mater; there was a large extradural clot present, which was removed, and the ruptured artery was ligated. The symptoms of compression disappeared immediately, and the patient made a good recovery.

Case 2.—Mr. W——, patrolman, got into an altercation with some street loafers one evening, and he was hit on the left side of the head below the temporal ridge with a half-brick that was thrown at him. He fell and instantly became unconscious. He was taken to Harper Hospital, where I saw him a few hours later. There was no external wound, but an extravasation beneath the scalp. He regained consciousness the following day, but suffered from a paralysis of the right facial nerve and loss of speech. He was soon able to be up around the hospital, but his facial paralysis did not improve, and his speech only partially; he knew quite well what he wanted to say, but could not articulate, and was obliged to write down what he wished to communicate.

Ten days later I made an incision over the seat of injury, which was in the upper portion of the temporal fossæ anterior to the ear, and found that there was a depressed fracture of the skull present and that a fragment had been driven through the meninges and into the

brain, producing a contusion and laceration of the latter; this fragment was removed with forceps and was accompanied by some loss of cerebral tissue. There was no hemorrhage present. The dura was first closed, and then the external wound. The patient was able to whistle and talk before the dressing was completed, and he made a perfect recovery.

The patient wore a heavy cap at the time of the injury, and this was evidently the reason that there was so little injury to the external tissue.

Case 3.—Mr. C——, aged forty-two, foreman in a laundry, was looking into an elevator shaft when a scale-weight (five pounds) that had been fastened on one of the wires as an adjuster fell and struck him over the left parietal eminence. He was taken to Saint Mary's Hospital, where I saw him about an hour later. He had a compound circumscribed depressed fracture of the skull with numbness of the right hand. He was given an anesthetic about an hour later, and the depressed fragments removed. The meningeal artery had been torn across behind the margin and bled freely. The dura was forced away from the bone and the margin nipped out with the rongeur forceps over the artery until its extremity was exposed sufficiently to be tied. The patient made an uneventful recovery.

Case 4.—A boy six years old was playing on the street and was struck by a car. He was picked up in an unconscious condition and carried home. I saw him about half an hour after the accident, at 9 A.M., and found him in a semiconscious condition with a weak pulse; he had vomited some. He had a marked circumscribed depression of the skull, about two and one-half inches in diameter, just to the right and anterior to the external occipital protuberance. There was some puffiness present, but no laceration of the scalp.

We decided that owing to the patient's age we would wait a few hours before doing anything radical, and gave him some stimulants and applied cold to his head. I saw him again at four o'clock; he had so improved that he was able to walk around the house, and the depression in the skull had almost entirely disappeared.

Case 5.—Mr. H——, aged forty-five, a brick mason, was at work when a brick fell off a scaffold about forty feet above him and hit him on the head. He was helpless for a few minutes, but soon regained his muscular power, and by the help of a friend was able to walk across the street to my office. He had a compound depressed fracture of the vertex over the left parietal eminence, with a partial paralysis of the opposite arm. He was sent to the hospital, where I attended him immediately.

The patient's head was shaved and the wound thoroughly cleansed.

I then proceeded to remove the fragments, and found particles of straw from his hat between the margins of the fragments; they were firmly held in the crevices by the broken bone, and some particles rested on the dura. He had a straw hat on at the time of the accident, and on examining it afterward there was found a V-shaped hole in it that had been cut out by the corner of the brick. I think that at the time of the injury there was some elasticity of the cranium, that the fragments were driven further apart and the straw was forced between these margins, and that when the force was taken off the portions of bone were crowded back by the pressure of the endocranial contents, for the dura mater was not ruptured. A dozen fragments were removed, and he made a rapid recovery.

Case 6.—Mr. H——, aged twenty-eight, was standing beneath a metal bucket used to elevate material to the roof of a building. The bucket slipped off the fastening when at the roof and fell, the margin of the bottom striking the patient diagonally across the vertex, knocking him senseless. I saw him half an hour later; he was comatose, and had a compound depressed fracture of the skull three and one-half inches long and half an inch wide, posterior to the coronal suture and running across the superior longitudinal sinus. The ordinary preparations were made, and I proceeded to remove the depressed portion. He did not require an anesthetic, for he was completely unconscious. After removing a few of the fragments there was a very free hemorrhage, for the superior longitudinal had been ruptured; this was controlled, and the remainder of the fragments were removed. He regained consciousness and complete use of his limbs, with the exception of his great toe (right side).

I opened the wound again on the sixth day, and found that a spicula of bone about half an inch from the margin of the wound, which was stuck into the dura mater, had caused this slight motor defect. He got entirely well after the second operation.

Case 7.—Mr. R——, aged thirty-four, a watchman, had been taking freely of alcoholic beverages and had delirium tremens; he attempted to commit suicide. He shot himself with a pistol, the ball entering the cranium through the right temporal fossæ, at a point one inch below the temporal ridge and one inch posterior to the external angular process. The bullet took a downward and slightly forward course; it entered the orbital cavity and passed through it, and then passed across the upper part of the nasal cavity and lodged in the superior maxillary bone of the opposite side (this was afterward shown by a skiagraph). The track could be traced with a probe. The eye was enucleated; the wound was douched out and drainage passed from the outer wound into the orbital cavity. There was a lot

of oozing of cerebrospinal fluid from this case; to have loss of this fluid there must be laceration of the dura and arachnoid.

The injuries that call for operative interference are those that produce compression, and this is caused by bone or hemorrhage. When the compression is immediate it is produced by the bone itself; when an interval exists between the time of the injury and the compression it is due to hemorrhage.

Intracranial hemorrhage is of three varieties, namely, extradural, subdural, and central. Extradural hemorrhage takes place between the inner surface of the skull and the dura, and therefore must detach the latter from the former, and the compression is produced slowly. Subdural hemorrhage takes place between the dura and the surface of the brain in the free subdural space, and is rapid. Central hemorrhage takes place in the brain tissue itself or the ventricles; when into the latter it is more rapid than the former.

Compression due to extradural and subdural hemorrhage is amenable to operative treatment, and the skull should be trephined as soon as a diagnosis is made, and the clots removed. Compression due to central hemorrhage is not often benefited by surgical interference.

These hemorrhages may follow a blow on the head when no evidences of fracture are present, and they may even take place on the opposite side to that on which the violence was received.

In the reparative process of the skull very little callus is formed; the osteogenetic action of the pericranium is not sufficient to fill in a narrow opening. These spaces that follow a trephining or the removal of fragments are filled in by fibrous tissue that in time becomes very firm. These portions of bone that are removed may be placed in a warm aseptic solution and replaced; this is not always successful, because the fragments may necrose and have to be removed later on. I have seen all the cases I have reported here from one to two years after the operation, and they did not appear to be disturbed from the loss of the bone tissue.

From the above I offer the following deductions:

1. That it is the injury to the endocranial contents and not the bone that must be considered.

2. That there may be contusion of the brain without fracture of the skull.

3. That there may be intracranial hemorrhage in simple non-depressed fracture of the cranium.

4. That severe intracranial lesions may be present when there are very slight external symptoms.

THE POSITION AND PHASES OF THE UTERUS.

BY BYRON ROBINSON, M.D., CHICAGO.

The uterus is one of the most movable organs in the body. Whether the mobility of a uterus is normal or abnormal requires careful judgment. For this reason it must be stated there is no single normal position for the uterus.

The normal position of the uterus varies within wide limits. By this I mean that the uterus can assume positions widely distant from each other at different times, and yet remain within the zone of health —*i.e.*, no compromising of circulation or trauma of the nerve periphery occurs in any of the many different positions assumed. Hence there must be several, many normal, positions for the uterus.

Among all the positions of the uterus which remain within the zone of health there can be but one normal anatomic position, and Waldeyer distinguishes this as the typical position of the uterus for the genus homo. As to mobility, the uterus should be divided into two segments, viz., the corpus, which has a wide free range of mobility, and the cervix, which is well limited in mobility because all essential uterine supports are attached to the cervix. The mobility of the uterus is chiefly anteroposterior, about a transverse axis which passes through the cervix.

The mobility of the uterus, cervix, and corpus depends on intra-abdominal pressure, on the state of neighboring or adjacent organs, on respiration, circulation, and on abdominal tumors.

The posterior deviation of the entire uterus is known as retroposition, the anterior as anteposition, the lateral as lateroposition, the ascending as proximal elevation, the sinking as distal depression. The above positions refer to the entire uterus—*i.e.*, cervix and corpus.

If the entire uterus is rotated about its long axis it is known as torsion—*e.g.*, dextro-torso et sinistro-torso. Torsion and other deviations of the uterus may be combined.

Should the uterus be taken together in the long axis—*i.e.*, corpus and cervix in one straight line as regards the axis of the pelvis—the deviations of the uterus are versions or extensions, as ante-extension (version), retroextension (version), and lateroextension (version).

If the corpus uteri forms an angle with the cervix uteri there arises what is termed flexion, as anteflexion where the uterus is curved on its anterior surface, retroflexion where the uterus is curved on its posterior surface.

Extensions (versions) and torsions of the uterus refer to rotation about the longitudinal axis of the corpus and cervix. Flexions of the

uterus refer to angulations or bending of the longitudinal axis or corpus and cervix at the internal os or isthmus. There are to be considered in uterine deviations (displacements or dislocations) flexions, extensions (versions), torsions, and ante-, retro-, or latero-positions. The last refers to the uterus as being as a whole displaced in positions.

Fixation is the characteristic of all uterine deviations. Various combinations of uterine deviations may occur.

The degree of importance to be placed on any single uterine deviation must depend on the degree or extent and pathologic symptoms attributable to it. One can say that many of the various uterine deviations are symptomatically normal—*i.e.*, without discernible pathologic symptoms. In other words, many uterine deviations are normal up to a certain degree. A uterus in normal position must be normal in anatomy (structure) and normal in physiology (function)—*i.e.*, the endometrium, myometrium, and perimetrium must possess no perceptible flaw. Also the circulation and nerve periphery must not be compromised.

As typically normal positions of the uterus with the subject in the erect attitude, the uterus should lie in the middle of the small pelvis so that the external os should be about on a level with the inferior border of the symphysis pubis, and on a level with the plane of the ischial spines—*i. e.*, planum interspinosum. The axis of the cervix lies in the axis of the pelvic curve, and the anteflexion angle is about 80 degrees. In short, the normal position of the uterus is anteverted in the median pelvic plane. This means with bladder and rectum empty or slightly filled.

The reasons for assuming the above positions of the uterus as reliable are:

1. They began in the fetus by showing the position with anteflexion.

2. The pregnant uterus assumes the position as long as it lies in the small pelvis.

3. The puerperal uterus assumes the position rapidly after parturition.

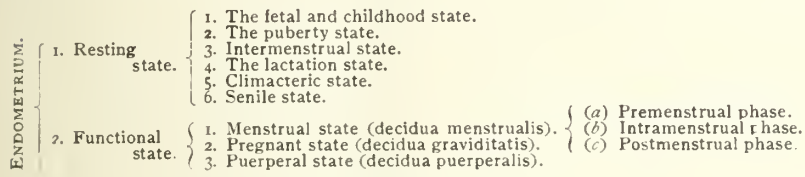
4. This same position is assumed by healthy living nulliparæ, and almost the same in the dead.

5. The uterus in this typical position of the median pelvic plane accommodates itself most perfectly to the pelvic organs and adjacent pelvic structures.

The fundus is about on a level of a line passing from the crest of the pubis to the third and fourth sacral vertebræ. The uterus lies midway between the plane of the pelvic inlet and the plane of the

pelvic outlet. The position of the uterus is influenced by age relations, by intra-abdominal pressure, by circulation, especially the venous, by the condition of adjacent organs, and by the shape of the bony pelvis.

The uterus should be considered in six different phases, viz.: (1) The fetal and childhood phase; (2) the puberty phase; (3) the menstrual phase; (4) the puerperal phase; (5) the climacteric phase; and (6) the senile phase.


Endometrium.
1. Resting state.
1. The fetal and childhood state.
2. The puberty state.
3. Intermenstrual state.
4. The lactation state.
5. Climacteric state.
6. Senile state.
2. Functional state.
1. Menstrual state (decidua menstrualis). (a) Premenstrual phase. (b) Intramenstrual phase.
2. Pregnant state (decidua graviditatis). (c) Postmenstrual phase.
3. Puerperal state (decidua puerperalis).

ARID REGIONS IN THE UNITED STATES FOR CONSUMPTIVES.

BY W. THORNTON PARKER, M.D, WESTBORO, MASS.,

Formerly Acting Assistant Surgeon U. S. Army; Surgeon U. S. Indian Service; Member Society d'Hygiene, France, etc.

"Cobb says any altitude in the arid region above 2000 feet is as good as any higher for acute consumption. For women, those in an advanced stage of consumption and those with a tendency to hemorrhage, care must be taken to select a medium altitude, and cases with stenosis must never go to a high one. Patients should understand that they must make it a business to get well. The stories of hunting and fishing and scenery, except in Colorado, are likely to be exaggerated."—*Journal of the American Medical Association*, Oct. 29, 1899.

The above item refers to an article published by Dr. Cobb in some medical journal to which I have not access at the present time; but the subject is so interesting that I beg to submit some remarks concerning this arid region which Dr. Cobb refers to.

Funk & Wagnall's Standard Dictionary thus defines arid: "Parched with heat; without moisture; very dry; barren; specifically, having little or no rainfall, and requiring artificial irrigation. The arid region of the United States is, approximately, that portion west of the hundredth meridian, *excluding* portions of California, Oregon, and Washington."

Major Powell states that "the arid lands of the United States are chiefly without trees."

From the Report of the Chief of the Weather Bureau (Part vi, Climatology), 1896–7–8, the following information is obtained concerning the climatology existing between the hundredth and one hun-

NORMAL MEAN OF TEMPERATURES—MONTHLY AND ANNUAL.

	Latitude.	Longitude.	Above sea level.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.	Length of record.
Dodge City, Kans.	37.45	100	2485	26.6	31 8	41.6	53.7	62 0	72.6	77.6	75 2	68.0	55 1	40.2	32 6	53.2	21—
Fort Apache	33.48	109 57	5000	35.3	40.2	45.8	52.4	66.3	68.5	72.7	72.0	65 9	55.4	43.6	39 0	54.2	12—
Fort Elliot	35.39	100.21	2673	32.4	38.2	47.0	51.1	64.8	73.9	78.3	76.2	69.7	58.1	43 5	37.6	56.4	11
Fort Stanton	33.39	105 26	6146	32.6	39.2	42.7	50.2	56.8	64.6	68 4	65.8	60.0	51 8	49 4	36 0	50.7	8—
Pueblo*	38 18	104.36	4075	28.7	30.1	40.4	50.5	58.7	68.3	74.0	72.3	65.2	52.2	38.8	33 7	51.1	7
Santa Fé	35.41	105.57	6966	27.9	32.0	39.5	46 6	55.7	65 1	68.5	66.3	59.9	49.8	37.6	30.8	48.3	22
Tucson	32.14	110 53	2374	49.4	53.2	59 5	65.6	74.0	82.3	87 2	81.5	77 7	68.5	57.0	53.0	67 4	8—

*Similar to Prescott, Arizona, although so widely apart.

dred and tenth meridian, in which the "health section" I have so often described is located. From 1867 to the present time I have known this remarkable region, traversing it foot by foot on horseback, in ambulances, and in railroad trains. So the opportunities for knowing this section, which I have called the "Western Health Section," should be fairly good.

"A true normal (temperature) or average may be defined as one that will not be materially changed, however long the observations upon which it is based may be continued. The time required to establish such a normal varies with different climatic elements and the period for which the normal is sought, whether a day, a month, or a year.

"The character of the weather in middle latitudes is to a great extent determined by the daily variations of pressure and the resultant changes in the direction of the wind. In the normal conditions of midwinter the continent is then much colder than the adjacent oceans, and the surface winds tend to blow outward toward the sea in almost all cases. The cold air of winter has a tendency also to run down mountain sides and slopes into the valleys below. This tendency is manifested on a grand scale on the plains east of the Rocky Mountains. In New England and the Middle States the contrast between the temperature of the air over land and adjacent water surfaces is so great that the prevailing winds blow toward the ocean in

obedience to the general tendency of air to flow from colder to warmer regions. This is merely another form of the statement that air flows from a region of high pressure to a region of low pressure. As the continent becomes warm under the influence of solar radiation, the areas of high pressure retreat toward the sea, and by summer the prevailing winds have changed very greatly. The interior of the continent is now much warmer than the sea on all sides. The rarefied air over the interior ascends, the barometric pressure is diminished, and air flows in from the oceans and colder regions of the north to take its place. The tendency of the surface air of the plains is now to flow up the slope toward the mountain region, and almost complete reversal of the conditions of winter."

From the Surgeon-General's office I have lately received a table of altitudes, as follows: Fort Lyon, Colorado, 3800 feet; Fort Supply, Oklahoma Territory, 2300 feet; Fort Gibson, Indian Territory, 600 feet; Fort Union, New Mexico, 6700 feet; Fort Selden, New Mexico, 4250 feet; Fort Craig, New Mexico, 4314 feet; Fort Cummings, New Mexico, 4750 feet; Fort Stanton, New Mexico, 6152 feet; Fort Elliot, Texas (Texas Panhandle), 2650 feet.

Concerning these stations as desirable residences for patients suffering from consumption I will mention them in the order of value.

Fort Union, New Mexico (6700 feet), where I was stationed some years ago, is in my opinion an almost ideal climate, either for *women* or those "in an advanced stage of consumption," and the chances are as good for a complete recovery in cases which permit of a favorable prognosis as in any other station in New Mexico. Fort Stanton (6152 feet) is another favorable station, and so is Fort Cummings (4750 feet), where I was stationed as early as 1867. Forts Craig and Selden, the former at the head and the latter at the foot of the Valley of Death, are places enjoying exceptionally fine climates and offering exceptional hopes to consumptive patients.

The dangers from Apache Indians which gave this region the terrible name of the Valley of Death, or Journey of Death (Jornado del Muerto), have long since disappeared. My own personal experiences back in the sixties in that locality bring up the ghosts of many anxious hours, but the climate was then and is now simply superb. It is dry and clear and invigorating, and although it may be classed in the arid regions it is capable of successful cultivation.

Fort Supply (2300 feet) and Fort Elliot (2650 feet) are excellent localities, so far as climate is concerned, for consumptive invalids. The elevation of Fort Elliot may or may not be too high in Dr. Cobb's estimation, but I served at that garrison in 1882 and found the climate delightful, although not by any means so desirable for con-

sumptive patients as the stations I have mentioned having an elevation of over 4000 feet, and nearer 5000 or 6000 feet. From the United States Geological Survey I have received the following communication concerning resorts where patients can obtain exceptional comfort and care and all the necessaries of life, with the hope of cure, if any such hope can be offered anywhere in this country, or, indeed, anywhere in the world. I have personal knowledge of very remarkable cures which have taken place at Santa Fé, Albuquerque, and Las Vegas. The latter place is exceedingly delightful, and I have frequently visited it, as early as 1867, and in 1868, and 1883 and 1884. The hotels, bath-houses, and arrangements for the care and entertainment and, what is most important, the *cure* of consumptive patients, are admirable. The scenery is beautiful, the air like wine, and the excursions and the hunting are by no means exaggerated.

DEPARTMENT OF THE INTERIOR.

UNITED STATES GEOLOGICAL SURVEY.

WASHINGTON, D. C., February 20, 1900.

W. T. Parker, M.D., Westboro, Mass.:

SIR—In answer to your favor of the 16th instant regarding certain elevations in the southwest, I have the honor to quote the following, which are mostly from adjusted railway levels. They are without doubt within a few feet of the correct elevations above sea level:

	Feet.
Santa Fé, N. M.	6954
Albuquerque, N. M.	4950
Las Vegas, N. M.	6398
El Paso, Tex.	3692
Ft. Hancock, Tex	3516

The elevations in the Texas Panhandle range from 1869 at Childress to 4694 at Texline.

Elevations in Southwestern Arizona go as low as 500 feet above sea level; South Central Arizona (Gila Valley, east of Prescott), 2000 feet; Central Arizona, vicinity of Holbrook, 5000 feet. The lowest elevation in New Mexico is in the southeastern part, and is slightly less than 3000 feet. Southeastern Colorado is 4000 feet, and Southwestern Kansas 3000 feet, above sea level.

Hoping that these figures give the information desired by you, I remain,

Respectfully,

H. C. RIZER,

Chief Clerk.

(G. R. 723-1900.)

Southwestern Arizona, with an elevation of 500 feet, and Fort Gibson, Indian Territory, with an elevation of 600 feet, are not localities specially desirable for consumptives. I have very great esteem for Ventnor, Isle of Wight, and for some of our New England summer resorts, for invalids, but when it comes to a serious consideration of climate cure for consumptives, the Western Health Section which I have so often described in our medical journals is my choice—Las

Vegas, Albuquerque, Santa Fé, Fort Union, Fort Stanton, and Fort Bayard, with a half-dozen other well known stations, and many more yet to be selected as that magnificent country is opened up to appreciative settlers.

Travel where you will no fairer land than New Mexico can be found. Its bright sunshine, the wonderful life-giving air, its unrivaled scenery, its opportunities for occupation, with almost certain pecuniary returns, have made this region a genuine El Dorado. Strange it is that so few will believe the stories of its desirableness, and so that lovely land continues on dozing and waiting for enterprise to set the wonderful machinery in motion.

In conclusion I offer tables from the United States Weather Bureau report showing the days of sunshine in Boston, Dodge City, Kans., and in Santa Fé, New Mexico. The dull-appearing figures show at a glance the bright, health-giving life and light of a land worthy of the poet's best hymn of praise, or of the hygienist's unqualified indorsement.

SUNSHINE AND CLOUDINESS, 1897.

BOSTON, MASS. (T.).

[N. lat. 42° 21′.]

Month.	Percentage of sunshine recorded during hours ending (local time)—														Total (hours).	Percentage of possible.
	5th hr. a.m.	6th hr.	7th hr.	8th hr.	9th hr.	10th hr.	11th hr.	Noon.	1st hr. p.m.	2d hr.	3d hr.	4th hr.	5th hr.	6th hr.	7th hr.	8th hr.		
January	.....	.....	.....	37	45	45	39	47	51	53	48	49	42	62	.. ....	.....	136.4	46
February	.....	.....	59	51	49	54	53	53	55	60	58	53	51	49	.....	.....	158.7	54
March	.....	54	42	48	50	49	44	47	50	46	42	40	40	36	33	..	104.9	44
April	71	46	61	61	62	64	65	64	58	54	56	52	53	51	38	.....	227.4	57
May	13	23	30	38	45	53	56	56	53	49	47	52	49	45	45	22	196.0	43
June	49	42	47	54	54	65	70	68	72	65	69	59	52	53	43	35	257.5	56
July	38	43	45	48	45	56	60	58	65	61	53	53	42	34	24	16	219.7	48
August	67	50	54	65	65	60	73	72	77	75	68	60	55	52	45	27	270.2	63
September	.....	58	66	69	73	72	80	82	82	81	66	55	55	52	49	...	258.0	69
October	.....	0	50	66	69	70	75	75	72	71	69	61	56	54	.....	.....	230.5	67
November	.....	.....	32	31	35	47	47	48	48	43	41	34	25	... ...	... ..	.....	118.6	40
December	.....	.....	.....	36	39	50	60	55	50	53	46	31	30	.....	.....	...	131.8	46
Sum	229	316	492	601	624	686	719	725	733	711	663	599	550	488	277	100	2,360.7	633
Percentage of possible	.....	.....	.....	50	52	57	60	60	61	59	55	50	46	.....	.....	.....	197.5	53

SUNSHINE AND CLOUDINESS, 1897—*Continued.*

DODGE CITY, KANS. (P.).

[N. lat. 37° 45′.]

Month.	Percentage of sunshine recorded during hours ending (local time)—																Total (hours).	Percentage of possible.
	5th hr. a m	6th hr.	7th hr.	8th hr.	9th hr.	10th hr.	11th hr.	Noon.	1st hr. p.m.	2d hr.	3d hr.	4th hr.	5th hr.	6th hr.	7th hr.	8th hr.		
January	.....	.....	.....	51	58	65	69	75	74	74	72	70	64	54	.....	.....	206.9	68
February	.....	.....	39	43	55	61	66	63	65	66	64	65	47	41	.....	.....	175.8	58
March	.....	50	58	57	63	63	63	66	62	60	60	58	55	42	28	..	217.7	59
April	.....	58	65	70	71	75	72	72	66	67	63	68	62	58	37	.....	260.2	66
May	22	32	52	65	69	68	73	68	68	73	78	79	73	64	32	36	278.5	63
June	54	59	63	68	76	87	86	80	83	86	83	87	73	73	41	31	323.2	73
July	69	75	85	90	91	88	88	89	87	89	87	86	79	76	68	65	376.2	84
August	.....	54	66	82	88	83	89	85	88	90	83	85	85	74	45	43	334 0	79
September	.....	83	83	83	87	92	93	91	90	90	83	85	82	73	81	.....	320.4	86
October	.....	50	54	65	70	72	72	73	74	78	77	75	62	61	.....	.....	243 4	70
November	.....	.....	54	64	82	81	79	73	73	76	73	72	68	100	.....	.....	223.9	74
December	.....	.....	64	54	68	74	77	78	77	75	72	69	64	.....	.....	.....	211.4	71
Sum	145	461	683	792	878	909	927	913	907	924	895	899	814	717	332	175	3171.6	851
Percentage of possible	.....	.....	.....	66	73	76	77	76	76	77	75	75	68	.....	.....	.....	264.3	71

SANTA FÉ, NEW MEXICO.

[N. lat. 35° 41′.]

Month.	Percentage of sunshine recorded during hours ending (local time)—																Total (hours)	Percentage of possible.
	5th hr. a.m.	6th hr.	7th hr.	8th hr.	9th hr.	10th hr.	11th hr.	Noon.	1st hr. p.m.	2d hr.	3d hr.	4th hr.	5th hr.	6th hr.	7th hr.	8th hr.		
January	.....	.....	.....	57	62	71	69	74	71	70	75	64	45	36	.....	.....	203.5	65
February	.....	.....	47	59	71	70	72	62	64	66	59	51	43	38	.....	.....	182.7	60
March	.....	36	62	75	78	83	80	83	82	83	77	78	73	51	30	.....	278.7	75
April	.....	58	74	83	90	86	86	75	72	68	70	65	71	64	35	.....	287.2	73
May	36	49	72	79	79	85	77	70	68	55	51	45	49	38	21	7	260.8	60
June	57	67	81	92	94	92	94	85	80	69	66	66	59	64	55	33	326.8	75
July	58	60	77	81	77	80	81	77	68	66	56	53	52	57	40	28	290.9	65
August	.....	48	77	93	96	91	90	87	74	65	59	61	56	43	24	50	293.8	70
September	.....	40	56	70	76	83	79	77	81	67	59	48	39	30	29	.....	234.0	63
October	.....	18	44	61	70	75	71	70	74	69	69	61	61	54	.....	.....	229 7	66
November	....	.....	70	76	84	89	84	78	86	88	79	80	70	50	.. ..	.....	249.6	81
December	....	.....	67	65	76	85	86	80	87	89	88	85	62	....	....	....	244.2	81
Sum	151	376	727	891	953	990	969	918	907	855	808	757	700	525	234	118	3080.9	834
Percentage of possible	....	.....	.. .	74	79	82	81	76	76	71	67	63	58	.....	.. ...	.....	256.7	70

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

TYPHOID IN CAMPS.

The experiences of the Cuban campaign have been repeated in South Africa. Notwithstanding the lavish provision made for the sick and wounded, the inevitable typhoid epidemic seems to have strained the resources of the medical department to the utmost. This experience must enforce the conviction that by far the most important problem any medical department has to encounter will be in perfecting arrangements for the management of these epidemics.

Some of the conclusions arrived at by Dr. V. C. Vaughan, and related in a paper read before the American Medical Association, are suggestive of the wide range of action necessary for the management of this disastrous incident of war.

Every regiment in the United States service in 1898 developed typhoid fever, and more than ninety per cent of the volunteer regiments developed the disease within eight weeks after assembling in State encampments. In most of the regular regiments the fever developed in less than eight weeks after going into camp. It not only appeared, but it became epidemic in most of the encampments. It occurred in those situated in the North as well as those located in Southern States. The invasion of the camps by this disease may not have been due to any lack of sanitary discipline, as typhoid fever is usually so widely distributed in this country that one or more cases are likely to appear in any regiment within six weeks after assembling. The chances are that as typhoid fever is so widely disseminated, in any regiment of 1300 men, assembled in any section, the sanitary conditions of which were perfect, one or more cases of typhoid fever would in any event develop.

The conclusions arrived at by those investigating the fever which occurred in our camps lead them to disregard the miasmatic theory of the origin of the disease. Typhoid fever is undoubtedly a disease

of specific origin. It is disseminated by the transference of the excretions of an infected individual to the alimentary canal of others, and it is more likely to become epidemic in camps than in civil life, because of the greater difficulty of disposing of the excretions of the human body. A man infected with typhoid fever may scatter the infection in every latrine of a regiment before the disease is recognized in himself.

The author of this paper considers camp pollution to have been the greatest sanitary sin committed by the troops in 1898. In some cases the commands were unwisely located. In some instances the space allotted the regiments was inadequate, and many commands were allowed to remain too long on one site.

Among matters needing precise and definite action, some method for the disposal of fecal matter is demanded. The regulation pit system is not a satisfactory method. The disinfection of fecal matter and its removal from camp are recommended, but these suggestions scarcely seem to constitute an adequate solution of the problem. Infected water, which by many is thought to be so important a factor in the spread of the fever, does not seem to have played any important part in the national encampments in 1898. Flies undoubtedly served as carriers of infection, and men transported infected material on their persons or in their clothing, and thus disseminated the disease. Personal contact was undoubtedly one of the means by which the infection was spread. After a command becomes badly infected with typhoid, change of location, together with thorough disinfection of all clothing, bedding, and tentage, is necessary. Except in cases of most urgent military necessity, one command should never be located upon a site recently vacated by another. The system of changing camps frequently seems to be as urgent now as it was in the days of Napoleon.

It will be interesting to note the conclusions arrived at by the investigating committee in regard to the South African epidemic. Here, as elsewhere, it will be most probably proved that camp pollution has been the chief sanitary sin.

To what extent the fever resulting from camp life is avoidable, and to what extent it is inevitable, will, however, probably prove a question our present knowledge may not entirely enable us to solve.

EDITORIAL NOTES.

Cold and the Plague Bacillus.

Some interesting experiments have been made by Dr. Noguchi, a Japanese physician who went to New-chwang, China, for the purpose of determining the effect of cold on the plague bacillus. He proved

that the bacillus is capable of resisting great cold. It can multiply at a temperature of 20 to 24° C., a much lower point than is tolerated by most bacteria. The freezing-point arrests the growth of the bacillus, but does not dehydrate it sufficiently to derange its protoplasmic organization.

Dr. Noguchi quaintly epitomizes in the *Sei-i-Kwai Medical Journal* the following information about the relations of the lower animals to plague:

"Birds and swine are quite immune to plague. Horses, cows, goats, sheep, dogs, and cats have more or less susceptibility, but they manifest only a slight lesion which is not fatal, while monkeys (ape) and other allied species higher susceptibility, and mice and rats are highest above all.

"For the preventing purpose of propagation of plague through mice or rats, Japanese government offered to buy the dead or living mice, where the people use the medicine — a mixture of arsenic — or traps and cats.

"After the plague invaded Japan, the Japanese Sanitary Association has offered a prize for the best method of hunting rats.

"About a month ago there were a few cases of plague in Honolulu, Hawaii, and the Chinatown was burned up and deserted for two years by American authority.

"When a mouse suffers from plague it loses its timid character, and appears to the room often, and dies in a corner or in shade of box, etc.

"Mouse has a habit of eating the corpse of its friends, and in town it dies of the same disease, so it aids for the latent propagation of plague."

Use of Suggestion.

In evidence of the fact that mountains cannot be removed without faith, and further that hypnotism is ineffectual when a mental reservation is present, the following curious case reported to the Société de Hypnologie is to be noted:

Some French officers contracted the Indo-Chinese habit of opium smoking, the wife of one of them even complacently preparing the pipes which her husband smoked. She soon experienced the intoxicating effect from the smoke, then smoked herself, and later exhibited symptoms of hysteria and anxious neurasthenia. Although she was an excellent subject for hypnotism, suggestion was powerless to affect these last symptoms as long as she concealed the cause. When she had confessed it, hypnotic suggestion put a stop to the habit with little difficulty. At the same time the nervous complications were cured.

ITEMS AND NOTES.

THE plague still continues at Hong Kong.

DR. MAX NORDAU is soon to visit America.

THERE is no relief from the famine which exists in India.

DR. NICHOLAS SENN has telegraphed the War Department offering his services for the Chinese campaign.

THE Delaware hospital fund has reached $19,000, and the buildings will soon be commenced at Wilmington.

THE yellow fever outbreak at Quemados is at an end, no cases having been reported from there this month.

THE American hospital ship *Maine* has sailed for China to care for the sick and wounded among the Americans and English.

DR. CHARLES F. CHANDLER, professor of chemistry of Columbia University, has received the degree of D.Sc. from Oxford.

A NUMBER of milk dealers in New Jersey have been arrested for adulterating milk, the special adulterant being formaldehyde.

OWING to the intense summer heat for the past few weeks, the death rate in Philadelphia has been exceedingly high this year.

THE Danish government has appropriated 400 kroner for the expenses of the delegates to the International Medical Congress.

MORTON COUNTY, KANSAS, which has a population of over 400, has had no serious case of illness and no physician for over a year.

THE sanitary condition of Cape Nome, Alaska, is at present a serious one owing to the presence of measles, typhoid fever, and smallpox.

AN antirabic institute has recently been established at Sassari, Italy. The funds for the maintenance of the institute will be provided by the communes of the province.

A HOSPITAL for children has recently been opened in Athens. It is called "Saint Sophia," in honor of Princess Sophia of Greece. There are twelve buildings, four of which are isolated for contagious diseases.

THE antinoise ordinance which was passed by the City Council of Chicago has been vetoed by the mayor, who advises a removal to Philadelphia for those who object to the roar and racket of a live city.

ADVICES from Vera Cruz show that Dr. Bellinzaghi's experiments with yellow fever patients continue to show remarkable results. All the new patients treated with the serum are improving, and the black vomit has been stopped.

THE Republican nominee for governor of Maine is Dr. John F. Hill, of Augusta. He graduated from the Bowdoin Medical College in 1877, and from the Long Island College Hospital in 1887, but has large business interests outside of medicine.

A MEMORIAL tablet was dedicated at Mackinac Island, July 10, to Dr. William Beaumont. The inscription on the stone reads: "Near this spot Dr. William Beaumont, U. S. A., made those experiments upon Alexis St. Martin which brought fame to himself and honor to American medicine. Erected by the Medical Society of the Upper Peninsula of Michigan, July 10, 1900."

ACCORDING to the *Medical Record*, among the lesser evils afflicting the inhabitants of Tien-Tsin are scarlet fever and plague, epidemics of which are reported to be raging there, the former among the whites, the latter among the natives. Plague is said also to have been prevalent in Peking for some time. The only Europeans attacked have been four Italian priests, who lived among the natives, and who died early in June.

AT the meeting of the Paris Société de Biologie, held on June 2, Richet and Hericourt announced that they inoculated a number of dogs with tuberculosis more than six months ago. One-third were fed with ordinary food, and all died in three to four weeks; another set was fed with cooked meat, with about the same results; while the third group was fed exclusively with raw meat, and all have survived to date and are in good health.

DR. CLAUS HANSEN, of Bergen, recently delivered a lecture before the Storthing, at Christiania, on the causes of tuberculosis and the fight against it. He stated that in 1896, 54.5 per cent of all deaths between fifteen and thirty years of age were caused by tuberculosis, and that about 7000 of the inhabitants of Norway die every year of this disease. During the thirty years of his own experience consumption had increased in the Bergen district eighty per cent.

The second annual meeting of the Rocky Mountain Interstate Association will be held in Butte August 28 and 29. The officers of this association are: President, Dr. C. K. Cole, of Helena; first vice-president, Dr. Leonard Freeman, of Denver; second vice president, Dr. R. Harvey Reed, of Rock Springs; treasurer, Dr. Charles G. Plummer, of Salt Lake City; recording secretary, Dr. Donald Campbell, of Butte; corresponding secretary, Dr. S. D. Hopkins, of Denver, Colo.

A community in Whiteside county, Ill., which has started up a sort of Dowieite or similar faith-cure establishment, seems likely, according to the *Journal of the American Medical Association*, to get into trouble with the local authorities. The head of the concern, one Abram Zook, has lately claimed supernatural powers of healing and has started up a sort of orphanage. Diphtheria having broken out amongst the inmates, he refused any medical aid, and there have been several deaths and nothing done until doctors were ordered there by the authorities.

The Hôpital Pasteur, founded by a lady for the application of Pasteur methods, and situated in the Rue Dutot opposite the Pasteur Institute, Paris, was opened on July 1. The director, Dr. Louis Martin, who lives in the hospital, is responsible solely to the Committee of the Pasteur Institute, to whom at each annual meeting he will present a report. The Pasteur Hospital contains fifty-eight beds, distributed in two pavilions. For the present it will be reserved for the treatment of diphtheria and hydrophobia. No charge is to be made for treatment.

Father L. L. Conrady, who worked for eight years among the lepers in Molokai, where he succeeded the heroic Father Damien, has recently taken the degree of doctor of medicine in the University of Oregon. His medical studies are said to have been undertaken solely for the purpose of making himself more capable of alleviating the sufferings of lepers. Although sixty years of age, and worn by a life among savage and semicivilized peoples, his intention was to proceed to the largest leper colony in China, situated in the Province of Canton, where, according to press reports, he will be the pioneer white man.

The *Revue Médicale de l'Est* gives some figures showing the results in Lorraine of the unrestricted sale of alcoholic drinks which is allowed by the law of 1892. The deaths from tuberculosis have increased from 264 in 1882 to 322 in 1897, and those from nephritis from 19 to 35. At Mareville there was in 1875 only 1 alcoholic in

57 insane persons; in 1898 the ratio had risen to 1 in 12. The deaths from epilepsy, which averaged 7 from 1875 to 1877, rose to 16 in 1888–92. The quinquennial average of suicides rose from 10 in 1877–81 to 24 in 1891–92, and that of accidental deaths from 9 to 21.

Dr. Zepherino Falcao has presented to the Royal Academy of Sciences at Lisbon a communication on the extension of leprosy in Portugal. Since the suppression of leper houses in that country the disease has gradually spread, and it is estimated that there are now some 1500 lepers in the country; this is a considerable proportion in a population of 4,700,000. The lepers are scattered throughout the country, no district being exempt; most of them, however, are on the coast and in the deep valleys. There are, however, also foci in the mountain regions. Dr. Falcao considers that the disease as it is met with in Portugal is very slightly contagious, special conditions being necessary for transmission to take place from one patient to another.

Owing to the ephemeral nature and exceedingly small size of bacteria, it would seem well-nigh impossible to study the minute forms which assuredly must have existed ages ago. Two French investigators, B. Renault and C. E. Bertrand, have, however, microscopically examined several varieties of anthracite coal and partially carbonized wood, and believe they have discovered petrified bacilli. Renault has even designated several of his species by name (micrococcus carbo, bacillus carbo, bacillus colletus). He advances the theory that these bacteria have effected the transformation of wood cellulose into coal, a theory which is decidedly opposed to our conception of the carbonization of wood. Bacteria, according to Renault, would therefore be most powerful factors in the geological development of the world.

The open-air marine treatment for consumption has been practiced, says an English weekly journal, with success for several years in Southern Brittany. The Pen-Bron Hospital is famous for its cures. It is used mainly by working people, the cost of maintenance being defrayed by the local authorities by whom they are sent. Its success has led to the creation of a magnificent private institution at La Baule, a few miles away, for well-to-do patients who can afford to pay for treatment. The new hospital, which is built of granite, looks out upon the sea from beautiful grounds, surrounded by evergreen pine forests. It has been fitted out on a luxurious scale, with a special system of drainage. The hydropathic department comprises hot and sea water baths, seaweed baths, electric brine baths, and hot-air baths, together with vapor, douche, rain, shower, and medicated baths.

NEW PUBLICATIONS.

DISEASES OF THE CHEST, THROAT, AND NASAL CAVITIES.

Dr. Ingals's valuable work on Diseases of the Chest, Throat, and Nasal Cavities is so well known to the profession generally that any detailed critical review of the fourth edition, just issued by William Wood & Company, seems superfluous. Very important and numerous additions appear in this edition, notably in the articles on Pleurisy, Bronchitis, Pneumonia, Actinomycosis, Diphtheria, and Empyema of the Accessory Cavities. As heretofore, much space is given to careful differential diagnosis, and parallel columns showing the variation of signs and symptoms greatly assist the student in mastering the intricacies of physical diagnosis.

In looking over the sections devoted to diseases of the throat and nose, it is rather refreshing to find that all those lurid chromolithographs which have adorned most of the recent text-books in this line have been scrupulously omitted. The impression created by such pictures is generally a delusion and snare, and diverts the attention of the intelligent student from the author's classical description. In this work the illustrations are introduced in a simple but satisfactory form to help in explaining the author's statements, and not merely to sell the book. The publishers are to be congratulated on the presswork and freedom from typographical blunders, which make the book a pleasant one to read.

The work is well known to the medical profession, and has always been a favorite; embracing as it does the diseases of the whole respiratory tract, it possesses unusual advantages to the student, and as a work of reference for the physician it is extremely valuable.

Diseases of the Chest, Throat, and Nasal Cavities. By E. Fletcher Ingals, A.M., M.D. Fourth Edition. One Volume, Extra Large Octavo, 787 pages. Illustrated by 254 Cuts and a Plate in Colors. Extra muslin, $4.50 net; sheep, $5.25 net. New York: William Wood & Company.

SEXUAL DISORDERS OF THE MALE AND THE FEMALE.

This is a second edition of the author's well known work. Prior to the appearance of his book, no systematic compilation of medical knowledge upon sexual subjects could be said to have been made, and such treatises as existed confined themselves to the elaboration of an unscientific conglomeration of symptoms such as sexual debility and irritability, seminal losses, spermatorrhea, and so forth.

The author describes the anatomy and physiology of the sexual apparatus in a scientific manner. Urethral inflammations as causes of sexual impairment are commented on very fully. The chapter on the prostate presents some new thoughts. The whole matter of genito-urinary diseases comes into consideration.

The matter of sterility is carefully elucidated, from the male and female aspects of the subject. The sexual perversions, fetishism, masochism, and sadism are described, and such subjects as *coitus reservatus* come in for consideration. The work is a complete review of the sexual question from the standpoint of a physician, and practitioners will find it one of value and significance.

A Practical Treatise on Sexual Diseases of the Male and Female. By Robert W. Taylor, A M., M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York. Second Edition. Ninety-one Illustrations and 13 Colored Plates. New York and Philadelphia: Lea Brothers & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Treatment of Complicated Fracture of the Neck of the Humerus.

Farquhar Curtis (*Annals of Surgery*, March, 1900) reports three cases of fracture of the neck of the humerus with dislocation of the upper fragment treated by operation. Careful consideration, based on his own and previously recorded cases of the relative merits of reduction, has led the author to the following conclusions: (1) In fracture of the upper end of the humerus with displacement of the upper fragment from the glenoid cavity, when proper attempts at simple reduction under general anesthesia have failed, operative measures should be resorted to, unless shock, other injuries, or extensive damage to the soft parts about the shoulder justify delay; (2) anterior displacements require an anterior incision, and subglenoid or posterior displacements require a posterior incision, probably by Kocher's method; (3) the head of the humerus should, if possible, be restored to its place, and resection should be resorted to only when reduction is impossible or likely to cause such extensive damage to the parts, or such prolongation of the operation, as to increase the risks of wound infection or of shock; (4) resection will probably give a better result in fracture of the anatomical than in that of the surgical neck of the humerus, but reduction is to be preferred in both cases; (5) asepsis is an indispensable requirement for a good functional result, and operative interference in this class of injuries should not be undertaken except under aseptic conditions; (6) motion should be begun in the joint as soon as the wound has healed—in ten to fourteen days after the operation.

Two Deaths from Gonorrhea.

At a recent meeting of the Berlin Dermatological Society, Rossman (*Medical Press and Circular*, July 11, 1900) reported two cases of gonorrhea, which give an answer to the question whether a pure gonorrheal infection can produce a diffused general disease. In the first case there was a great probability of a streptococcus infection, but on the other hand the gonorrheal infection must be looked upon as the starting-point of the disease. The second case is rather boldly

described as unique. It was that of a girl of twenty-two, who came under treatment for pain in the abdomen and lower part of the back. The hymen was not intact. The condition found on examination led to the performance of an anterior elytrotomy. On the third day after the operation the temperature, which up to then had been normal, ran up to 38.1° C.; on the fourth day to 39°; and later, after a remission, it went up to 39.6° C. Great pain was then felt in the hypochrondrium, or lower part of the thorax. On the seventh day the temperature was 40° C., on the eighth 40.5°, and the pulse began to fail. A bath was then given, and the temperature fell to 37°. After some oscillations the patient died on the tenth day. The autopsy revealed a fluid in the peritoneum resembling a pale mayonnaise sauce, without adhesion of intestines or meteorism. A bacteriological cultivation of the fluid revealed a pure gonococcus culture. The pus was rich in fibrin, poor in leucocytes; in these gonococci were numerous, but there was no trace of any other microorganisms.

Surgery Among the Insane: Its Difficulties, Advantages, and Results.

A. T. Hobbs (*Canadian Journal of Medicine and Surgery*, July, 1900) gives the following as the advantages obtained: (1) Little or no shock, as a rule, succeeds even a prolonged and dangerous operation, and postoperative pain is rarely complained of. (2) Except in occasional cases, the regimen laid out for them is strictly adhered to in spite of all whims and fancies. (3) Ether narcosis is very quickly recovered from in the insane. A gentle slapping of the face will quickly arouse the most profoundly anesthetized patient, and very little nausea or vomiting occurs subsequent to the use of ether. The results of operative surgery, especially gynecological, among the insane, are twofold: Primarily, the restoration of physical health; secondarily, the improvement and recovery of the mental condition. In summing up mental results the statistics of 168 cases are given, divided into two groups: (1) 98 inflammatory, with an average ratio of recoveries of 51 per cent, and a ratio of mental improvement of 17 per cent; (2) 70 non-inflammatory, with a recovery rate of 25.5 per cent, and an average ratio of mental improvement of 31 per cent. The number of deaths succeeding operation in the 168 cases was four, or a little over two per cent.

Separation of the Epiphysis of the Olecranon.

F. J. Cotton (*Boston Medical and Surgical Journal*, June, 1900) gives the history of two cases of separation of the epiphysis of the

olecranon. Both were in boys, one sixteen, the other eleven, and both were the result of falling upon the hand. In the diagnosis of such cases by the skiagraph the varying forms of the olecranon epiphysis in different individuals are to be taken into account. Dr. Cotton concludes: "It seems noteworthy only that the separation may occur without other injury, apparently from muscular action; that little reaction in the joint results from the injury; that the epiphysis does not tend to become widely separated; and that union with the shaft and entire restoration of function are to be aimed at seemingly with some confidence of success."

MEDICINE.

The Use of Borax and Formaldehyde as Preservatives of Food.

W. D. Halliburton (*British Medical Journal*, July 7, 1900) says that an antiseptic is inimical to the life of the organisms that cause putrefaction. It cannot, therefore, be harmless to the vital processes in the higher animals. Numerous clinical observations have been recorded which show that dyspeptic and other troubles follow the use of foods which have been treated with commonly employed preservatives like borax. Even if, as in the case of boric acid or borax, the poison is not cumulative, the continuous passage of foreign substances through the kidneys cannot be beneficial to those organs. The writer says that the very efficiency of formaldehyde renders it particularly objectionable. Aqueous solutions of formaldehyde are very irritating to the skin, and if the drug is introduced into an animal by intravenous injection, the red blood-corpuscles are disintegrated, respiration is disturbed and may stop. Convulsions and coma may also supervene. Formaldehyde, used in very weak solutions, has a deleterious effect on the gastric digestion of proteids, on the pancreatic digestion of proteids, on the pancreatic digestion of starch, and on the curdling action of rennet.

An Interesting Case of Fetal Rickets.

Fedor Schmey (*Der Kinderarzt; Pediatrics*, July, 1900) was called to attend a woman aged twenty-seven, a primipara, whose labor had been delayed. On examination he found the head in the second vertex position. The sutures and fontanels could not be distinctly felt, however. The head would come to the floor of the pelvis at each pain, but recede again after the pain was over. As

there was no progress for an hour the forceps were applied, and the child delivered. It was perfectly well formed, except that the head presented a number of peculiar features. All the sutures of the skull were widely gaping, and pulsation could be distinctly felt through them. On the left side of the sagittal suture there was a triangular island of bone, a "Wormian bone," separated from the other bones of the cranium by a broad suture. A second Wormian bone was situated at the right side of the apex of the occipital bone, and was not an island, but a bony peninsula, one side of which was bounded by the lambdoid suture, two other sides by sutures that are present in fetal life, and the fourth was already ossified. A third Wormian bone was situated on the other side of the apex of the occipital bone, was also a peninsula, and was perfectly analogous to the second. These last two bones undoubtedly represent the os incoe, a bone of considerable embryological and anthropological interest. The name comes from the fact that it was found very frequently in the skulls of ancient Peruvians. It constitutes one of the osseous islands, from which the occipital bone develops There is no doubt that the case was one of fetal rickets, although no cause could be found in the heredity of the child.

Heart Disease in Childhood.

Heart disease in childhood is the subject of editorial discussion in a recent issue of the *Therapeutic Gazette*. Attention is called to the fact that, on account of the paucity of symptoms, there is little occasion for medication, our remedies being powerless to cure the organic lesion. Of palliative measures, the first place is given to rest, enforced if necessary; an hour of complete repose, two or three times daily, is strongly urged. As light bodily weight is advantageous to a diseased heart, the avoidance of fat-producing foods is next advised. Overeating is another danger to be prevented. As improvement of the blood is frequently of prime importance, the administration of arsenic, with or without iron, according to circumstances, is recommended, as is also corrosive sublimate in doses of $\frac{1}{100}$ grain three times daily. The usefulness of calomel or blue mass in relieving congestion of the portal circulation is likewise pointed out. Where there is a strumous tendency, syrup of the iodide of iron is advised. In some cases bitter tonics are beneficial. The use of digitalis is generally, though not invariably, condemned. On the other hand, excellent results are said frequently to follow the administration for considerable periods of time of one or two minims of the tincture of strophanthus, twice or thrice daily. Alcohol is considered to be rarely indicated. The continued employment of strychnine is deprecated, although its value in an emergency is admitted.

Acidity of the Urine.

The teachings of M. Joulie, as to the correct method of determining which he accepts, Dr. Cantru (*Bull. Gén. de Thérap.*, April, 1900) decides, contrary to the usual belief, is uncommon in the great majority of those suffering from arthritis, rheumatism, eczema, diabetes, and neurasthenia, urine of less than normal acidity being the rule in these cases. To overcome this deficiency, he has been led to employ phosphoric acid in doses of 10 to 100 drops daily. This high dosage seldom produces disturbances, even when continued for months, the most unfavorable subjects being those affected with gastritis. In many affections other than those already enumerated, the doctor finds that grave symptoms are almost always accompanied by subacidity of the urine, and that they are ameliorated by the administration of large doses of phosphoric acid. To mask the taste, he gives the remedy in combination with phosphate of soda in the following proportions:

Phosphoric acid	2 ounces.
Sodium phosphate	4 ounces.
Water	2 pints.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Pituitary Gland as a Factor in Acromegaly and Giantism.

W. Hutchinson (*New York Medical Journal*, July 21, 1900) sums up briefly:

1. That the greater part of the overgrowth is found at or near the tips of the segment-crescents, as in acromegaly, differing from the latter mainly in that it is not exclusively confined to the tip of the segment or last division of the limb.

2. That the facial part of the skull is enlarged out of all proportion to the cranial, particularly in the region of the lower jaw.

3. That the condition, whether it be regarded as normal or morbid, is one that distinctly tends to shortness of life, and would appear to have an average duration of scarcely more than twenty years.

4. That the mental and physical vigor of the giant is distinctly below par, and his death usually comes either from a steady progressive increase of this weakness, or from some trifling accident, or usually mild intercurrent disease.

5. That the sexual powers appear in the great majority of cases to be far below normal.

6. That there is a decided preponderance of males among the victims of this condition.

In all of which statements there is a decided parallelism with acromegaly.

Last of all, and from the point of view of this essay of greatest interest, is the fact that the one morbid condition which is peculiar to both these disturbances of nutrition, the enlargement of the pituitary body, is found to be present in a large majority of cases of both.

Diphtheritic Paralysis and Antitoxin.

F. Ransom (*Journal of Pathology and Bacteriology*, July, 1900), after an extended series of experiments on rabbits in which he injected the toxin of diphtheria, has summed up his conclusions as follows:

1. Paralysis may certainly be expected after intoxication with not less than one-fourth of the minimal fatal dose. With doses between one-fourth and one-eighth paralyses occur, but are not constant, and below one-eighth no paralysis was noticed.

2. The larger the dose of toxin the severer will be the paralysis, if the animal survives long enough.

3. Neutralized mixtures of toxin and antitoxin, containing only about one lethal dose or less, do not appear to cause paralysis.

4. Antitoxin, given fifteen to twenty-two hours after intoxication, with doses of toxin not greater than the lethal dose, exercises in large doses a mollifying influence on the subsequent paralysis. This influence is more evident on smaller doses of toxin than on such as are but little less than the minimal fatal dose. Small doses of antitoxin have no evident effect in diminishing the paralysis.

5. Transferring these results to practice amongst human beings, we may expect liberal doses of antitoxin, given early in the illness, to influence favorably the subsequent paralysis, and this beneficial influence is likely to manifest itself not so much on the local paralyses (soft palate, etc.) as on such symptoms as failure of the heart. Severe cases are, however, likely to be followed by some paralysis in spite of even large doses of antitoxin.

On the Action of Diphtheria Toxin on the Spinal Stichochrome Cells.

H. Rainy (*Journal of Pathology and Bacteriology*, July, 1900) says in regard to the facts which may be asserted on the question of diphtheritic paralysis, that not only changes take place in the peripheral nerves, but also alterations in the spinal cord itself. In the experi-

ments made by the writer such changes were invariably present after death when paralysis was observed during life. Of the latter, cellular changes are the most characteristic. They may, however, be associated with vascular ones. The changes are very definite and consist in chromatolysis to a moderate degree, in increased staining capacity of the achromatic substances for acid stains, and vacuolation. In this connection, the writer is inclined to support Nissl's opinion that each toxic substance has a somewhat specific action on the nerve cells, and whilst it is probably impossible to tabulate the effects produced in such a way that one could definitely argue back from them to the toxin which caused them, still there are more or less marked divergences in the action of different groups of toxic agents. With each of the three toxic substances of which the writer had an opportunity of making observations—lead, tetanus toxin, and diphtheria toxin—the aspect of the affected cells differed in several particulars. In diphtheritic paralysis the cell change is probably antecedent to the nerve change in the majority of cases. This, however, requires further investigation before it can be asserted with confidence.

THERAPEUTICS.

The Treatment of Grave Neurasthenia by Spermin (Poehl).

From a reprint of an article in the *Berliner Medicinische Wochenschrift*, by H. Salomon, we have the result of a recent inquiry into this interesting subject. Spermin is not alone a constituent of the male reproductive organs, but also of the blood, and is found in the ovaries, the pancreas, the thymus and thyroid glands, and in the spleen. From its extensive dissemination in the organism its value to the system may be in some measure suspected. One property of spermin is to further oxidation processes, but it can only exercise this property when in a state of solution. In many conditions, mainly of exhaustion, spermin passes into the form of phosphate, in which it is not soluble either in water, saline solution, or blood serum. In changed alkalescence of the blood, although spermin is present, it is inactive, and the oxidation processes are not carried out in the organs in a normal manner, whereby autointoxication is set up. In all these cases of lowered oxidation, anemia, leucemia, diabetes mellitus, nephritis, carcinoma and cachexias, neurasthenias, tabes, and in the uric acid diathesis, spermin is indicated. As a matter of fact, Poehl's spermin has already been a good deal used, and according to many with good results; whilst it has never been known to do harm. Among other

diseases it has been employed in neurasthenia, hysteria, epilepsy, and chorea, in tabes dorsalis, paralysis, neuritis, etc.

Spermin is administered either by the mouth or by subcutaneous injection. It should be given by the mouth when a slow action is desired. Poehl has used the double salt of spermin hydrochlorate, with sodium chloride in a four-per-cent aromatic alcoholic solution; 20 to 30 drops of the essence is given three times a day in a warm alkaline mineral water. For subcutaneous injection it is supplied in glass tubules. In one case of neurasthenia in a single lady, aged forty-eight, a total of twenty-eight injections was made. The result was the complete recovery of the patient; and not only did the neurasthenia disappear, but also a part of the arthritis, from which she was also suffering. The pains in the joints diminished, and their mobility increased. A second case was that of a lady aged fifty-four, who received fifty injections. Here, also, the spermin showed itself eminently useful.

The Treatment of Whooping-cough.

The medicinal remedies recommended in the treatment of whooping-cough have been many and strange, but nothing in the nature of a specific—nothing which can claim a uniform effect—has yet been discovered. No doubt there are drugs, such as antipyrin and opium, which tend to diminish the frequency of the attacks, but in the main we still rely on hygiene and diet in the management of our cases.

In its severer forms the attacks are so frequent and distressing that the practitioner gladly welcomes any new suggestion, but so many have been the disappointments that he not unnaturally views a fresh remedy with distrust. Antitussin, however, which is recommended by Max Helm (*Berl. Klin. Woch.*), has the great advantage of external and easy application. It is used in the form of an ointment—difluordiphenyl 5 parts, vaselin 10 parts, lanolin 85 parts—which is rubbed well into the neck, throat, and interscapular space, after the parts have been well washed with soap and water. In the sixteen cases in which he tried antitussin, Helm claims marked success, after quinine and belladonna had failed. The fits at once become less frequent, and soon there is a marked relief in the distressing symptoms attending the fits. During an epidemic the author thinks that the application of the remedy in the earlier stage may prevent the development of the convulsive seizures.

Helm regards antitussin as the best known remedy for uncomplicated whooping-cough. The readiness with which it can be applied, and the absence of all gastrointestinal disturbance, should secure for it a thorough trial.

Suprarenal Therapy.

Bates (*Medical News*, March, 1900) says that suprarenal extract is soluble in water, insoluble in ether and alcohol. It reduces solutions of Fe_2Cl_6 and iodine, and yields an alkaloid "epinephrin." It is a local astringent, vascular constrictor, and powerful cardiac stimulant. Applied locally to the nose and throat it reduces congestion, and is of especial benefit in rhinitis and hay-fever. Local applications to the eye lessen congestion in conjunctivitis, keratitis, and iritis, and hasten the absorption of inflammatory tissue. In lacrimal stricture and abscess the writer injects a solution of the extract through the "puncta." The vascularity is rapidly diminished, and any pus present may be expressed via the canal. Locally applied to the Eustachian tube, the congestion is reduced and deafness and tinnitus disappear. Its hemostatic properties are well known, and it can be used thus with confidence, as no clots are formed. In Addison's disease and asthma it has given good results, and two grains of the dried extract given internally in exophthalmic goitre will lessen the heart-rate and decrease the size of the thyroid. The normal heart is not affected when given internally, neither the normal blood-pressure nor pulse, but an intermittent pulse becomes regular, a weak pulse stronger, and feeble cardiac muscle remarkably stimulated. All the effects produced are only temporary, so that repeated applications are necessary. But in all forms of inflammation it is very useful in reducing tension and allaying pain.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Primary Epithelial Tumors of the Bronchus.

Nicolas, in a contribution on this subject to the *Gaz. Hebdom. de Méd. et de Chir.*, 1900, No. 10, reports from the literature a group of thirty-five cases of neoplasm which was described as primary cancer of the bronchi. It occurred much more frequently in the male sex. Heredity was seldom a feature of the etiology. The location of these tumors is variable, but they are most frequently found on the right side. Nothing of special import regarding the pathogenesis was reported, and in several cases there was history of a trauma. More often there were several tumors, and located on both sides. The primary seat is often the chief bronchus, sometimes its first division, and occasionally the smaller bronchial glands. Macroscopically bronchial cancer is not to be distinguished from primary cancer of the lung, a consistent mass of bluish gray or spotted appear-

ance similar to brain tissue. The volume is generally small. Histologically these epithelial tumors are divided into papilloma, adenoma, epithelioma, and carcinoma. To which category these bronchial tumors belong it is difficult to say. The mucous membrane appears thickened, often three times as thick as normal. Sometimes the ciliated epithelia remain, sometimes they have completely disappeared. The other tissues and the bronchial glands are more or less thickened and hardened like carcinomatous tissue. The cartilage shows the greatest resistance. The blood-vessels are very often embedded in the new formation. The lymph vessels, as in all malignant tumors, are involved. The epithelium of the alveoli of the lungs shows cancer cells which almost completely occlude the lumen. Other tissues involved secondarily show the same relations and same elements as the primary neoplasm. Stroma is generally very abundant, and the cells have the most varied forms—cylindrical, cubic, and polymorphous; indeed, the same tumor may show the greatest variations in cell formations.

The symptomatology is similar to that of tumors of the lungs. The symptoms vary according to the seat and development of the neoplasm—signs of stenosis, dyspnea, pleuritic symptoms with or without effusion, and irritable cough, mucopurulent expectoration (rarely discolored with blood), intermittent pains, unilateral and bilateral, between the shoulder-blades in the form of intercostal neuralgias. There is indeed no symptom which is specially characteristic. In the later stages the cachexia and the general symptoms develop and are not to be misunderstood. The diagnosis is not only very difficult, but oftentimes impossible. Tuberculosis does not exclude carcinoma. Lymphocarcinoma is rarer than cancer. Sometimes an exploratory puncture with a thorough microscopical examination throws light on the case. The Roentgen rays may give the location and size. The course is always very rapid and may be divided into two periods: first, the latent, of uncertain duration; and secondly, the active, lasting from six months to one year. The prognosis can never be in doubt. The therapy is only palliative, and confined to relieving the cough and pain and increasing the strength of the heart.—*Centralbl. für Innere Med*, 1900, No. 27.

Six Cases of Frontal Sinus Empyema.

Before a recent meeting of the London Laryngological Society (*Journal of Laryngology and Rhinology*, No. 7, vol. xv) Dr. Herbert Tilley showed six cases of chronic frontal sinus empyema, upon five of which he had performed the external radical operation. Three

cases were bilateral, and of these one had been operated upon on both sides; the others, as yet, on one side only.

In three of the cases, after freely removing the anterior wall, curetting away the diseased mucous membrane, and making a large opening into the nose, a Luc's drainage-tube was inserted, and the external wound sutured at the close of the operation. In the remaining two the sinuses were packed with gauze instead of inserting the tube, a method which Dr. Tilley considered far preferable to Luc's operation. The exhibitor thought that the success of the operation depended upon careful attention to three main points:

1. Removal of the anterior end of the middle turbinal and all chronic inflammatory products in the mid-meatal region before proceeding to the external operation.

2. Making a free passage into the nose.

3. Careful curetting of the diseased mucous membrane, followed by packing with gauze, until a healthy lining of granulation tissue was produced.

By making the incision in or immediately below the eyebrow, the scar, as in the cases exhibited, was scarcely noticeable. The sixth case was interesting in that over the region of the left frontal sinus was an expansion of the outer wall of the sinus, resembling superficially a syphilitic boss the size of a five-shilling piece. The patient had complained of very severe headaches, accompanied by profuse discharge of pus from the nose, and the nostril was blocked by many large polypi. Since these had been removed the headache had entirely ceased, and it was easy to irrigate the sinus through the nose.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Lecturer on Dermatology, Detroit College of Medicine.

Lupus Erythematosus Secondary to Tuberculosis of the Skin.

In a paper entitled "Some Clinical Observations on Lupus Erythematosus," J. A. Fordyce, M.D., and O. H. Holder, M.D. (*Medical Record*, July 14, 1900), report the following case, which was presented before the New York Dermatological Society, at which several opinions were expressed as to the nature of the eruption. The patient was a woman fifty years old, a widow. She had been married twenty-five years, during which time she had six children and one miscarriage; five of her children are living and well. Eleven years ago she

had a paralytic stroke affecting her right side and followed by a loss of speech, which persisted for two weeks. At the present time she has a symmetrical erythema of the cheeks and nose of a purplish-red color, with slightly elevated, well defined edges; on the right cheek there is a considerable atrophy of the skin, while on the opposite side there are several retracted scars. On the right also a subcutaneous nodule can be made out. The left ala nasi is partly destroyed from an old ulceration. There is considerable induration under the erythematous lesions, but no scaling or separate nodule suggesting lupus vulgaris. Her right ring-finger is swollen from involvement of one of the phalangeal bones.

The authors were at first inclined to think the woman had syphilis, upon which a lupus erythematosus had become engrafted. Large doses of potassium iodide had failed to produce any effect upon the induration or the bone lesion. Lesions on the cheek had existed about eight years. After a thorough trial of the iodides, the diagnosis of tuberculous gummata which had healed leaving retracted scars, and the present affection, an unusual type of lupus erythematosus secondary to skin tuberculosis, suggested itself. It is difficult to impart to others the impression produced on one by a careful observation of a case of cutaneous disease which does not conform to the usual types. In this patient the long-continued redness and infiltration of the nose and cheeks, with atrophy, and absolutely none of the diagnostic features of lupus vulgaris, would almost force one to the conclusion that the active process was a lupus erythematosus.

At the same meeting of the society Dr. Jackson presented a young man who had previously had numerous patches of lupus erythematosus of the face, which had disappeared after the excision of strumous lymph nodes from the neck. Two years after he was found to have lupus vulgaris. The history of the case seemed to show clearly the intimate connection between the tuberculous lymph nodes in the neck and the eruption on the face, the spontaneous disappearance of which after removal of the tuberculous foci would speak against its having been a primary lupus vulgaris.

Bronson has reported a case of erythematosus, scaly and pustular eruption, probably an atypical lupus erythematosus, in a woman with tuberculous lymph nodes in the neck, which disappeared after the nodes were removed. The eruption recurred with every recrudescence of the focus in the neck.

These cases are extremely suggestive, if they do not furnish the actual proof that an extra-cutaneous tuberculous focus may be the source of toxins capable of producing lupus erythematosus or closely allied eruptions.

The frequent association of lupus erythematosus and tuberculosis, together with the occasional outbreak of the former disease as a generalized eruption with severe constitutional symptoms, favors the view of those who connect the two processes by means of the toxin of the bacilli. The characteristic atrophy of the connective tissue may be brought about by the necrotizing principle of the germs, which Dr. de Schweinitz has shown to be a crystalline substance that is intensively active in minute quantities.

Should it ever be possible to prove this hypothesis, which has a certain amount of clinical evidence to support it, a satisfactory explanation would be afforded of these rapidly fatal cases of the disease which have been described by Kaposi, Hardaway, Besnier, and others.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Calcium Carbide for Inoperable Cancer of the Uterus; Technique.

Grusdew (*Münch. Med. Woch.*, June 12, 1900) outlines his method of using the carbide, which does not materially differ from that advocated by Guinard, Livet, and others.

The patient is placed in the lithotomy posture, external genitals and vagina disinfected, the cervix exposed with Simon's valve or Cusco's speculum, the vaginal and cervical surfaces, especially the tumor, are dried with absorbent cotton, and one or two fragments of calcium carbide, of about the size of a hazelnut, carried by means of dry forceps against the ulcerated surface. These fragments are held in place with a pad of sterilized clay and a cotton tamponade loose enough to permit of undisturbed micturition. This absorbent tamponade is to be conducted so as to prevent untoward cauterization of the vagina with unslaked lime resulting from decomposition of the carbide of calcium. From two to three days later Grusdew removes the tampon, and either repeats the cauterization once or advises the patient to report again on the reappearance of hemorrhage, fetid discharge, etc. He has also noted good results from insufflations of powdered calcium carbide upon ulcerated cancers of the womb (previously treated with fragments of the same), and also in some cases of benign ulcerations of the cervix.

Untoward effects (of a mechanical nature) can be avoided by the

use of certain precautions. Guinard cites a case in which the excessive generation of acetylene gas gave rise to a genuine explosion, which contingency may be prevented by carefully drying the parts with absorbent cotton before introducing the remedy. Cases have been recorded in which penetration of the gas through the tubes into the peritoneal cavity (this penetration may be obviated by loose tamponing) produced violent pains, and Guinard himself records two cases of severe diarrhea traceable to the use of the carbide.

A further point to be borne in mind is the danger incident upon the simultaneous use of carbide of calcium and the thermocautery, the generated acetylene and the atmospheric oxygen giving rise to an explosive mixture.

Preventive Gynecology.

R. Smith (*American Journal of Obstetrics*, May, 1900) summarizes the various possibilities of preventive gynecology under the five headings of care of the woman before marriage, during gestation and labor, and during the climacteric, prevention of gonorrhea and syphilis, and prevention of carcinoma. With regard to the last named two, carcinoma is to be prevented by the repair of all tears of the cervix occurring about middle life, and gonorrhea and syphilis by the diffusion of a knowledge of the risks run when a woman marries a man of loose habits. The care of the woman before marriage includes the making of a physical examination in all cases of persistent or severe pain at or between menstrual periods, and of protracted amenorrhea without constitutional cause, also when there is menorrhagia without evident cause. At puberty the girl ought to have explained to her by her mother the fundamental facts of her reproductive functions. Care in pregnancy of course includes the examination of the urine. In labor surgical cleanliness is a *sine qua non;* a judicious use of the forceps may be a very useful means of preventing future gynecological mischief. Tears should be repaired. The woman should be examined three months after labor. Minor pelvic surgery is the conservative gynecology of to-day; when this is recognized there will be less major or abdominal surgery.

Puerperal Eclampsia.

Dr. R. Jardine (*British Medical Journal*) treats this affection with diuretic infusions, and bases his recommendation on twenty-two cases so treated, with but five deaths. Other measures were, of course, not neglected. For the control of the actual convulsions recourse was had to chloroform, veratrum viride, chloral, and bromide. Free action

of the skin was secured by means of a hot pack or steam bath. The bowels were opened with magnesium sulphate, given through a tube when necessary. On account of the slow action of diuretics administered per os, injections were made, generally under the breast, of from one to three pints, each containing one drachm each of potassium bicarbonate and sodium chloride; or the potassium salt may be replaced by sodium acetate in equal amount. The injection may be repeated if necessary. The author claims a distinct diuretic effect from these injections, and also that the urine passed subsequent to their use showed increase of urea and uric acid.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Hysterical Polyuria.

J. Abadie reports an unusual case of polyuria in the March number of *Archives de Neurologie*, Paris, the difficulty dating from a fourteen days' exposure to a violent tempest at sea in a disabled ship. While greatly impressed by his peril, he never lost hope of reaching *terra firma*, but during the storm he suddenly needed to urinate more frequently during the day, and during the night two or three times. This occurred in March, and he was carefully examined in December, when life had become a burden. He could not rise quickly enough to prevent accident at night, and by day he could with difficulty keep his clothing unsoiled, and found no boarding-house keeper willing to keep him for any length of time.

On examination, he appeared of medium figure and robust aspect, not at all emaciated, and apparently in vigorous health. No facial asymmetry, pupilary and other reflexes normal, no trembling or deviation of the tongue, teeth decayed, palatine arch normal. Pharyngeal and abdominal reflexes feeble, cremasteric reflex inconstant. No spinal deviation or tenderness, cutaneous sensibility normal, but scattered over the left side of the body a few areas could be mapped out of impaired sensation to pain (pricking and pinching). The visual field was concentrically lessened.

Intelligence and memory were good. He is not immoral; is subject to headache.

Respiration, circulation, appetite, and digestion were all normal. There was no pain on pressure in renal region, and no evidence whatever of nephritis. Palpation over the ureters and bladder was not at

all painful. The urethra was normal; micturition alone was abnormal. He could not rise soon enough to respond to the sudden desire to urinate; quantity was rarely over 30 to 40 cubic centimeters. He could go an hour without the desire, more often not. The act was followed by slight vesical tenesmus, and it occurred twenty to thirty times each twenty-four hours. Night had but the slightest effect on its frequency.

No abnormal elements were found in the urine, the specific gravity of which was 1.007. Evidently the trouble was purely functional. Hysterical, and the son of a hysterical parent, he was evidently a case of hysterical polyuria.

Psychotherapy achieved a victory here, methylene blue, purely by its psychic effect, eventually accomplishing a cure.

Landry's Paralysis.

Acute ascending paralysis, so often of very rapid development and quickly fatal ending, is discussed in the *Journal of Nervous and Mental Diseases* for February, 1900, by Drs. Philip Coombs Knapp and John Jenks Thomas, with especial reference to its pathology.

Although probably of toxic infectious origin, evidence as to bacterial origin is as yet inconclusive.

Case 1 was that of a fairly healthy young woman suddenly attacked, and who died in fifteen days. The autopsy showed degeneration of the nerve cells in the anterior horns, degeneration of the anterior and posterior nerve roots and of the peripheral nerves, with dilatation of the blood-vessels in and about the cord.

Case 2 was that of a young man suddenly attacked with weakness of the legs, increasing to complete paralysis and extending to the abdominal and respiratory muscles, to those of the face, of mastication, and deglutition. The reflexes were lost; sensibility not much impaired. There was later some muscular atrophy and a complete recovery.

THE MEDICAL AGE

VOL. XVIII. DETROIT, AUGUST 25, 1900. No. 16.

ORIGINAL CONTRIBUTIONS.

COMMON SENSE VERSUS SO-CALLED CHRISTIAN SCIENCE.

BY C. C. MAPES, LOUISVILLE, KENTUCKY.

When deaths occur because of criminal neglect—and several such instances have recently come to light, followed by fruitless legal proceedings—it seems imperative that those possessed of common sense and scientific qualifications requisite to adequate enlightenment of the masses should institute radical interference, that the less fortunate may be protected and their lives and interests conserved.

Several fatalities from disease are reported to have occurred recently in the States of Indiana, Kansas, etc., under the treatment of so-called Christian scientists, which means nothing more nor less than criminal neglect; and while arrests followed such fatalities in two or three instances, conviction seems not to have eventuated. In one case the jury is said to have disagreed (evenly divided between conviction and acquittal), and was discharged; in another the judge claimed he could not interfere because of the apparent element of religion entering into the proceeding, therefore the case was dismissed.

In the language of a distinguished editorial writer, the deaths which have occurred (in Indiana, for example) in consequence of want of medical attention to the families of Christian scientists (who are neither Christian nor scientific) raise the question whether we are living in the nineteenth century or the thirteenth.*

* While this article is being prepared four deaths within as many weeks from disease under Christian science treatment, "absent" and otherwise, come to the writer's notice: one in Georgia, one in New Jersey, and two on the other side of the water—one each from heart disease, peritonitis, diphtheria, and typhoid fever. It would be interesting to know how many deaths occur yearly in civilized countries from disease under treatment of so-called Christian scientists. The number is probably much larger than ordinarily supposed, as few of them come to light. How long (O Lord, how long!) will those in whose hands the carrying out of our laws is entrusted countenance such atrocities!—C. C. M.

These unfortunate occurrences remind one of the following dialogue appearing in an exchange:

> MRS. FADDE (Faith-curist): How is your grandfather this morning, Bridget?
> BRIDGET: He still has the rheumatics mighty bad, mum!
> You mean he thinks he has the rheumatism; there is no such thing as rheumatism!
> Yis, mum!
> A few days later:
> And does your grandfather still persist in his delusion that he has rheumatism?
> No, mum; the poor mon thinks now thot he's dead; we buried him yisterday!

The following is excerpted from a published account: "Warrants have been issued for 'Doctors' E. and F., leaders of the Christian scientists, on the charge of manslaughter. They are charged with being responsible for the deaths of a child of the former, and the wife of the latter, both of whom died without receiving medical attention. The Christian scientists do not believe in doctors, and say that sickness is nothing more than imagination. E.'s wife, who died last week of typhoid fever, did not believe in 'Christian science' and wanted her husband to send for a physician, but he declined, and her death was due to neglect."

In view of the advanced enlightenment of practical thought—scientific, political, sociological, religious, etc.—does it not appear strange that practically no attention is devoted to the mitigation of an evil the results of which are of vital importance to the welfare of the human race, viz., the practices of so-called Christian scientists?

What is Christian science? An article by Dr. Frank E. Fee,* of Cincinnati, Ohio, under the caption, "Wanted, a New Name for a New Form of Insanity," gives so many salient points that the present writer takes pleasure in reproducing it *in extenso:* He states: "I want a name that will describe a portion of the human race, principally of the feminine gender, who are so devoid of reason that they can look upon the suffering of humanity without compassion, who can sit beside their fellow beings and see them suffering the tortures of the damned and say with a smile that 'they should not say that they are sick or have pain, because they are only thinking so.' I want a name that will describe idiots who cannot be probated, who walk, talk, eat, sleep, and enjoy the same pleasures that other beings do, and yet believe—yes, believe—they do not do so; who believe that the mind controls all natural laws and all movable and immovable things, not necessarily confined to this earth, but to the entire universe; who clothe and protect their nakedness and yet believe that such a thing as the body does not exist; who are following an author who believes

* The *Cincinnati Lancet-Clinic*, 1898.

that she has been especially ordained to make a new discovery in the scriptures and who believes every mortal man a liar."

This form of insanity should demand the attention of the medical profession for the same reason that would an epidemic of cholera or of smallpox. It exists principally among faddists, rainbow-chasers, and hypos, individuals who are seeking for something that will revolutionize natural and medical science and set all the world to thinking in the opposite direction. These idiots are known to the world as Christian scientists, faith-curists, mentaculturists, etc., but after searching medical literature in vain I am unable to give a correct scientific name.

Scarcely a day passes but we see in the daily papers an account that so-and-so has died while under the care of these so-called healers, and what explanation do they give? It is always that the patient had not a sufficient amount of faith, or could or would they have become sufficiently "spiritual" they would never have died, when in the estimation of sane people they only too well know they have become spiritual, and it remains for the coroner, the undertaker, and the preacher to do the rest.

It will probably be interesting for some to know what these Christian scientists preach. They say they teach by opposites, by the reversal of all known natural laws; they say the heart and blood are nothing but a myth, a delusion and a snare. To quote from their text-book, "the metaphysics of Christian science, like the rules of mathematics, prove the rule by inversion." For example, there is no pain in truth, and no truth in pain; no nerve in mind, and no mind in nerve; no matter in mind, and no mind in matter; no matter in life, and no life in matter. And I suppose it doesn't matter what it is, there isn't anything in it. Again: "The seasons will come and go, with changes of time and tide, cold and heat, latitude and longitude. The agriculturist will find these changes cannot affect his crops, the mariner will have dominion over the atmosphere and the great deep, over the fish of the sea and the fowls of the air. The astronomer will no longer look up to the stars; he will look out from them upon the universe; and the florist will find his flower before he beholds its seed."

Can a sane being imagine an inmate of Longview more insane than a Christian science healer irreverently bending over the head of an unfortunate being who has been mortally wounded by a locomotive, and is just drawing his last breath, while the healer is saying: "Come, get together; you are not hurt; your right leg does not lie on the other side of the track or your left arm in the engine fire-box; you are only thinking so. You are not bleeding to death; there is no blood—

you only think so. Come, live and become 'spiritual.'" But the poor sufferer dies and becomes spiritual.

The question is asked by many, Does not Christian science, etc., in many cases do good? Do they not assist in building up diseased minds? The answer is a strong negative. It is a case of an exchange of diseases; they may recover from an imaginary complaint only to absorb a more serious malady; the secondary disease far exceeds the primary. Again, the question is asked, Do they do harm? An affirmative is the answer. They hoodwink the public by citing cases of phantom tumors as large fibroids, of hysterical paralysis and hypochondriasis as true organic disease, and parade these cases before the medically ignorant public as cases they have cured, for the purpose of defrauding the people of their hard-earned money under the pretense that they receive no pay for their services, but that all paid to them they will receive as love-tokens, and also to make new converts to the faith.

Were it possible for these psycho-pathological degenerates to understand that there exist two great divisions in disease, the organic and the inorganic, and were it possible for them to separate these and treat the inorganic alone, no objection to their faith would be raised. Will they do it? No, for if such were the case they would thereby acknowledge the existence of disease and be compelled to employ physicians to make the differentiation! But what do they do? They continue along the narrow insane path of believing in the non-existence of disease and treat cases of contagious and malignant character by the same method as cases of hysteria or hypochondriasis. They openly violate quarantine regulations; they refuse to relieve pain, no matter how intense; they take toll at the gate of death by obtaining money under false pretenses, destroying the last hope or chance of any poor unfortunate suffering from an organic disease weak enough to allow them to practice their mercenary and insane methods upon him.

Can anything be imagined more foolish, ridiculous, more insanely idiotic, than the attitude of a divine healer practicing his so-called "scientific methods" in a case of puerperal eclampsia, diphtheria, smallpox, typhoid fever, pneumonia; or in the treatment of a fracture, gunshot wound, or other serious injury?

Kentucky is not exempt from the obnoxious presence of the so-called Christian scientist. The writer has knowledge of the report of a case of intussusception, occurring in an eight-months-old infant, which was treated by leading "healers" of the sect according to their usual methods, and pronounced cured. The child died five days later without medical attention, and no legal steps were instituted looking toward punishment of the parents or others therefor, although death

unquestionably resulted from criminal neglect. Such occurrences are too frequent to be allowed to pass unobserved.

It must be remembered that between religion, the church (Christianity), and science (medical) there can be no possible affiliation, since one opposes and contradicts the other at every turn. To the uneducated and thoughtless, however, the euphonious terms "Christian science" convey the probable meaning that the adherents to such a faith must of necessity be both Christian and scientific, while as a matter of fact they are likely neither—indeed, it can hardly be understood how one can profess both and conscientiously practice either. Moreover, it is obvious that the attitude of Christianity (religion—the church) has been distinctly antagonistic to science since the earliest history.

"The establishment of Christianity, beginning a new evolution of theology, arrested the normal development of the physical sciences for over fifteen hundred years. The cause of this arrest was twofold: First, there was created an atmosphere in which the germs of physical science could hardly grow—an atmosphere in which all seeking in nature for truth as truth was regarded as futile. The general belief derived from the New Testament scriptures was that the end of the world was at hand; that the last judgment was approaching; that all existing physical nature was soon to be destroyed; hence, the greatest thinkers in the church generally poured contempt upon all investigators into the science of nature, and insisted that everything except the saving of souls was folly.

"Nothing in the evolution of human thought appears more inevitable than the idea of supernatural intervention in producing and curing disease. The causes of disease are so intricate that they are reached only after ages of scientific labor. In those periods when man sees everywhere miracles and nowhere law—when he attributes all things which he cannot understand to a will like his own—he naturally ascribes his diseases either to the wrath of a good being or to the malice of an evil being.

"St. Ambrose declared that the precepts of medicine are contrary to celestial science, watching, and prayer. . . . From this idea was evolved that fetichism which we shall see for ages standing in the way of medical science.

"Theology, developed in accordance with this idea, threw about all cures, even those which resulted from scientific effort, an atmosphere of supernaturalism. In this atmosphere of theologic thought medical science was at once checked."*

In almost every line of White's wonderful work is portrayed dis-

* White: Warfare of Science with Theology, etc., 1897.

tinct evidence of the antagonistic attitude of religion toward science, an attitude which existed from the earliest ages, until the final triumph of science over the church in recent years.

A transcript of the law of the State of New York bearing upon the liability of physicians and others reads: "A physician or surgeon, or person practicing as such, who, being in a state of intoxication, without a design to effect death, administers a poisonous drug or medicine, or does any other act as a physician or surgeon, to another person, which produces the death of the latter, is guilty of manslaughter in the second degree." Further: "Where a person engaged in an unlawful practice of medicine, contrary to the statute, kills a person by administering medicines which he believes not to be dangerous to health or life, he is guilty of manslaughter" (Marsh *vs.* Davidson).

Under the law above quoted (and other similar statutes for various States) it would seem impossible to secure conviction of a Christian scientist, even if death take place under his treatment, and even though he be practicing in violation of the so-called medical practice act, because he administers no drug or medicine which might cause death.

Of all the quacks, charlatans, and pretenders in Christendom, the so-called Christian scientists are the most absurd in their apparent beliefs and practices; and how a sane human being can be so humbugged, fooled, misled—call it what you will—surpasses all intelligent understanding. This refers to their treatment of disease, not to their religious doctrines, whatever they may be; with the latter we do not presume to meddle, except when they concern the health and safety of human life as already shown.

That the subject demands the serious attention of the medical profession is evidenced by the fact that not infrequently a death occurs under circumstances which make it appear that the fatality might readily have been averted had the services of a physician been secured or allowed; but the Christian scientist relies, he claims, not upon material but spiritual assistance, and as a consequence members of his family and others who accept his services are allowed to pass into the unknown without any effort to save them except an appeal to the "unseen power which controls the universe." If this does not constitute criminal neglect, the writer confesses that he utterly fails to comprehend the meaning of the term. The penitentiary and the asylum are suitable abiding places for individuals who practice and preach such idiotic doctrines, and the sooner they are incarcerated in one or the other the better it will be for humanity in general, and those shallow, gullible creatures who are so easily humbugged in particular.

SIMPLE GOITRE.

BY F. W. POWERS, M.D., REINBECK, IA.

Frequently failing to obtain satisfactory results in the treatment of simple goitre, during some years of my practice, prompted the selection of this title.

An occasional interrogation from different colleagues, who have suffered a like disappointment to themselves and their clientele, and a desire to assist in the unraveling of this skein of perplexity, are the motives for the present report.

I have nothing particularly new to extol, and by some would be called obsolete. I believe that to obtain results by therapeutic or surgical interference depends more upon the technique of application of the remedial agent or interference, than upon the remedy or the principle of interference itself.

He who prevents a serious disease by the early appreciation and restoration of perversion of function should receive greater commendation and plaudits than he who only seeks to attack the more serious lesion. The most skilled dentist is not he who extracts teeth, but he who perfectly repairs them; the most skilled surgeon is not he who amputates a limb, that an artificial one may be adjusted, but he who restores the offending member. And so, without any personal egotism or bigotry, I believe he treats bronchocele best who restores the physiological function and symmetry of the gland without sacrificing a portion of the organ. We are not unmindful that cases arise, but seldom, however, that will demand the surgeon's knife.

I need hardly say that this very vascular, ductless, glandular organ, weighing about two ounces, is situated in the anterior region of the neck, resting posteriorly on the anterior and lateral surfaces of the trachea and inferior border of the larynx, and extends upward on either side of the latter. It is relatively larger in children than in adults, and larger in the female than in the male. It is usually composed of two lateral lobes connected near their inferior borders by an isthmus which rests on the second and third rings of the trachea. Occasionally a third lobe is found, which extends upward from the junction of the isthmus with the left lobe. The lobes and isthmus are firmly attached to the trachea, larynx, and esophagus by the deep cervical fascia.

The anterior convex surface is covered by the anterior external muscles of the neck and overlapped by the sternomastoid on either side.

The carotid sheaths usually lie external to the gland, but some-

times, more particularly on the right side, are held within the posterior glandular structure.

The arteries, lymphatics, and veins, which are many, anastomose freely with their kind. The terminal branches of the arteries follow the inflections of the external glandular investment. These inflections divide the lobes into irregular lobules, which are composed of many closed follicles lined with epithelium, which really gives the organ its vital phenomenon. Within the acini is found much colloid material, the product of this epithelial lining, and is thought to find its way into the circulation through the lymphatics.

There are those who contend that the function of the thyroid is the removal of toxic elements which are the result of normal body metabolism, and the symptoms noticeable after thyroidectomy are occasioned by autointoxication. Again, there are those who claim that the gland has only a secretory function, and that the secretion entering the blood has a marked influence on metabolic changes and the central nervous system.

Baumann has been able to isolate a new organic compound from the gland, which he calls thyroiodine. Whether this compound acts as an antitoxin or as a cerebrospinal tonic and stimulant is still *sub judice*. Clinically, I believe we will all agree that the gland has a marked influence on the quantity of mucin contained in the system as well as normal vasomotor impulses, general nutrition, mental energy, breadth of mind, and brilliancy of thought and expression. Instead, then, of concurring in the legendary evidence of the location of our psychical being in the pituitary body, judged in the light of higher criticism of Christian evidence, we would place this little gland as the sentinel at the threshold of entrance to our psychical development and existence. However, we must all agree that its function is of paramount importance to the natural physiological evolution of body and mind.

A high degree of atrophy or hypertrophy with subsequent degeneration may so interfere with the nutrition of the central nervous system as to produce destructive changes and thereby develop those allied conditions, cretinism, myxedema; or through an increased functional activity coupled with vasomotor disturbance we may find manifest the trinity of symptoms so common in the exophthalmic variety. It is evident, then, that any one of the trio may be the sequel to a simple goitre.

While with us goitre is usually sporadic, in certain regions, as in the valleys of the mountainous regions of Switzerland, Chili, and Mexico, it seems to be endemic and occasionally epidemic. While endemic goitre occurs where endemic cretinism is absent, yet when

the latter is found the former is found more frequently. Many cretins have bronchocele, and those who have not often have non-cretinous brothers and sisters with large goitres.

It is affirmed that the offspring of the third generation, where the parents of the first and second have been goitrous, are sure to be cretins.

Authorities have attributed the development of goitre to the salts of magnesium and calcium found in drinking-water, but we now know that they do not have the etiological importance formerly attributed to them. Doubtless certain families inherit a predisposition to it; in such all that is needed is the proper stimulus or environment.

Sexual derangement or repeated pregnancies in those of a phlegmatic temperament frequently act as an exciting agent. We believe the greater liability of derangement of the sexual function in the gentler sex explains the more frequent occurrence of the malady in them. I have been told many times that the goitre seemed to enlarge with the return of each menstrual period. I do not remember having ever seen a benign simple goitre before puberty, and others report that such are seldom found.

Any obstruction to the free circulation through the vessels of the neck has a favorable influence upon the growth of a bronchocele.

By keeping in mind the position of the gland, the liability of enlargement in any direction, including the mediastinum, its attachment and movement with each act of deglutition, the objective and subjective symptoms, such as hoarseness, vocal paralysis, venous turgescence of the face, a cerebral fulness, dyspnea, shortness of breath, lobulated or nodular feel, you can hardly err in reaching a correct diagnosis.

The goitre can be more easily palpated by directing the patient to sit erect, and while he maintains the head at the same axis to the body direct him to draw his head downward, when the goitre is brought forward. Now, standing by his side and a little to the rear, place your thumbs well down behind the sternomastoid on both sides and force the gland still more forward, when you will be able to palpate it with the palmar surface of the fingers.

The hyperplasia may be general throughout the glandular tissue, giving us the parenchymatous variety with its smooth regular or nodular enlargement of soft resistance, or it may be more confined to the stroma, producing a more dense resistance common to the fibroid variety. Again, the pathological changes may be quite limited to the follicles, with an increased amount of the glandular elements of mucinous matter, producing the follicular formation, which, through

confluence of the dilated follicles, forms a true cyst or a multiplicity of cysts.

Sometimes the bronchocele is only a transitory hyperemia, but frequent hyperemia will occasion here, as elsewhere, permanent vascular changes engendering perversion of function with hyperplasia.

If the vascular changes are produced through vasomotor inhibitory influence with but little glandular pathological change, the goitre may then be quite pulsating, and together with the associating symptoms remind us that it is of the exophthalmic kind. Through subsequent secondary changes of either variety, calcareous, amyloid, or colloid growths may be formed. I believe that it is quite common to find a mixed variety—the pulsation, the density, and the lobular or nodular feel indicating which portion of the gland is most affected.

As was said in the opening, I wish to commend an old remedy; accordingly, we will take up the subject of iodine therapy, but instead of advising our patient to paint the enlargement with tincture of iodine or rub it with an iodine ointment, I prefer to use a saturated solution of iodoform in Squibb's ether, and inject the solution into the body of the gland. A new solution must be made frequently. Some one may ask, Why not use iodine in solution? My answer is that it has been shown and proven that the solution of iodoform in ether has a greater percentage of recoveries.

The clinician is sometimes able to demonstrate facts that the physiological chemist is unable to prove. Things seemingly occult must at times be accepted until further investigation can explain the phenomena. Permit me then to suggest the hypothesis that iodoform not only acts as a substitute for the insufficient thyroiodine secretion, but also stimulates physiological action in the perverted cell epithelium of the acini, and prevents degenerative or hyperplastic changes, like unto iodoform-glycerin emulsion in tubercular joint affections.

Before injecting the goitre, the neck and needle should be rendered surgically clean. Insert the needle inward and backward at the most prominent point. When the needle has entered the substance of the gland, resistance to its passage ceases, and we are given the impression of having entered a cavity. Never force any solution from the syringe until satisfied that you are inside the gland. Only once did I ever permit any part of the solution to escape outside of the gland; in this instance the tissues became very tender, although they did not suppurate.

I begin the injections with five to eight drops of the solution and gradually increase the dose to fifteen or twenty drops, depending on the amount of irritation and resolution gained by the preceding treatment. I seldom inject both sides at one sitting, but both may be

injected once a week. The injection sometimes occasions a considerable amount of pain up along the side of the face and head, and sometimes down the jaw in the region of the ear and along the back of the neck. This pain lasts but a few minutes. At times the ether flushes the face and forehead. The patient can taste the iodoform in about one minute after starting the injection. The treatment makes the injected side a little tender for a few days, and when this subsides it is ready for the next treatment. In cases in which there is a tendency to inflammation, with soreness existing for a long time, necessitating longer intervals between the injections, I usually prescribe the compound tincture iodine to be taken internally, five to ten drops three times a day with milk, in connection with the injections. I have also given thyroid extract to a few patients, but could not see any greater improvement with this agent than without it. In certain cases, after withdrawing the needle, I have heard a gurgling sound in the gland, which would lead one to think that the carotid had been punctured. What produces this peculiar sound I cannot say, but this I know: the patient seems to suffer no inconvenience from having had it. The same patient always had the gurgling sound at each treatment. As the size of the gland diminishes it seems to harden, and we find it necessary to insert the needle deeper in order to reach inside the soft glandular structure. I have often inserted a long needle to its shoulder, and even depressed the tissues, to obtain the required depth. None of my cases have ever suffered a relapse, and I have some of five years' standing. In one case the goitre had existed for twenty-five years, and she had marked symptoms of exophthalmus.

The conclusions drawn and the opinions here expressed are based upon the treatment of twenty cases, the course of which I was able to follow. While this is a very limited number, yet straws tell which way the wind blows. I have abridged the report of these cases into the following summary. Let me here acknowledge my obligation and gratitude to Dr. Rholf, of Waverly, Iowa, for a statement of his cases, which I have included in my report:

The number of cases treated was twenty—three males and seventeen females. The age of the youngest was thirteen, and the oldest fifty-eight. Exophthalmic symptoms were quite noticeable in three. The duration of the disease varied from one year to twenty-five years, the average duration being seven years. Treatment reduced the circumference of the neck from one to three and one-half inches, depending on the size of the goitre at the beginning of treatment. The average number of injections was twelve, the least number five, and the greatest number thirty. Every case treated showed decided improvement, and those which received ten or more injections were

cured. The reason for discontinuing treatment in those who were not relieved was negligence on the part of the subject. Four of the cases came from two families. Of all the cases, sixteen were completely cured and four greatly improved. Thyroid extract was given to six in addition to the injections, and all were cured, save one, which stopped treatment after eight injections. This case had some heart symptoms as well, and the goitre was quite pulsating. It is not uncommon to have goitrous persons complain of heart symptoms. Thyroid extract is thought to be more beneficial in cases of true hyperplastic tissue in the young, whereas in the colloid or cystic growths it is practically useless. Compound tincture iodine was prescribed in three cases; all were cured.

In the statistics to which I have access I find reported eighty-seven cases, and in all there was a diminution in the circumference of the neck, and ninety per cent were reported as improved. The treatment is considered free from danger, as the mortality was one death in one thousand injections; this was due to the formation of an embolism.

I have said nothing in regard to the operative treatment of simple goitre. As I have not found it necessary to resort to such interference, I do not presume to know much about it. Authorities agree that total thyroidectomy is a formidable affair for the patient. A partial removal is usually successful in the hands of skilled surgeons who operate frequently in this region. In general practice few will consent to operative treatment, but would herald with delight some less severe measures that would give relief, for esthetic reasons, if nothing else.

Let me admonish you to exercise more care in the supervision and treatment of simple goitre, not for cosmetic reasons and financial advancement alone, but to prevent mental obliquity; and endeavor to abort myxedema or a cretinous progeny, for it is evident to me that the ideal physician in the years to come will not be he who attempts only to cure, but rather he who prevents disease.

CONSERVATIVE TREATMENT OF ACUTE SUPPURATIVE INFLAMMATION OF THE DRUM CAVITY AND ATTIC.*

BY WILLIAM CHEATHAM, M.D., LOUISVILLE, KY.

In a recent conversation with some of my local brother specialists I found the great difference in our experiences in such cases so peculiar and interesting that I thought it well to write a short article on the

*Read before the Louisville Clinical Society.

subject. One gentleman had had twenty or more mastoid cell cases recently; another not so great a number, but many more than I had observed. I remarked that I had not opened the mastoid cells in over two years, yet in the meantime I have treated many cases of acute suppurative middle-ear diseases in both the adult and the young.

Experiences of this kind I know are frequent, yet I think rare enough to put on paper.

Some years ago one of our old general practitioners read a paper before one of our local societies in which he gave an account of his experience in obstetrics. He had delivered, I think, over 1200 women; he had never had sepsis in any of his cases, and had never used instruments. Another some years ago had not seen a case of diphtheria. So such things go.

Some months ago I was called to see a merchant sixty-five years old with an acute catarrh of his right middle ear. He had la grippe, fever, and intense pain in ear, with a bulging in posterior superior portion of canal, so much so as nearly to conceal the drumhead. I made a free incision, passing my knife up into the attic, evacuating much blood and serum. A hot bichloride douche was used every three hours, and the ear covered with cotton and a hot-water bag. The pain continuing I had leeches applied to the tragus; there was in a few days pain over the mastoid with edema. Flaxseed poultices were used day and night; the swelling over mastoid persisted; fluctuation in a few days showed pus in the post-auricular region. I made a free incision, evacuating a large quantity of pus, which had but little odor; a probe introduced passed into the middle ear. I introduced a tent of iodoform gauze, and dressed the wound with gauze. New dressing was applied daily; ear syringed daily. In two weeks the wound had healed, also the drumhead.

Dench says concerning such a case (pages 338 and 339): "The pus may burrow along the entire length of the wall and make its appearance in the post-auricular region as a soft fluctuating swelling. This is particularly liable to occur in children, where the tissues are less firmly attached to the parts beneath, and the membrana tympani is so superficially placed. Cases of this class are particularly prone to mastoid complication.

"Examination of a large number of cases teaches us that the mastoid is usually involved before the soft parts covering the posterosuperior wall of the canal become detached from the underlying bone. Hence, evidence of a collection of fluid in this region constitutes an almost pathognomonic sign of mastoid inflammation."

Some few weeks ago I was called to see a child nineteen months old with such an abscess well developed. An incision with same treat-

ment as given in the case described above resulted in a cure in four or five weeks. The probe was passed to the middle ear from behind.

I have just discharged a carpenter fifty years old who had an acute suppuration of his right attic, with tenderness and slight edema over the mastoid, in which I made an incision as in first and second cases. He was treated with poultices, leeching several times, and hot bichloride douches, and is now after six weeks at work. He was treated as an office patient.

Mrs. S——, aged thirty-five years; acute suppuration of the attic. Free incision up, in, and back was made; hot bichloride douche; flaxseed poultices were applied. Was discharged cured about one week ago, after five weeks' treatment, with hearing three-fourths perfect. She is a very frail woman, and I feared tuberculosis.

In these cases what is known as the Wilde incision internally was made. I have not yet given up the Wilde incision. I find it of much service in many cases. In cases in which the incision is indicated I now frequently with a blunt instrument dissect the tissue over the mastoid up to the canal edge of the bone, and pass a probe into the attic and drain from behind. The perforated drumhead usually heals very quickly under such conditions. Within the last hour I have made the incision in the person of a man fifty-five years of age, who has had ear trouble for five and a half weeks. There was considerable swelling over the mastoid, especially just above the auricle. I feel sure the cells are not involved.

This I give as some of my experience in such cases in the last few months in which it is advised to open the mastoid cells by most of the authors. I have seen some cases in consultation in which the mastoid cells were opened by other doctors, and agreed that it should be done. I believe, though, if our text-books are followed, many such operations will be performed when leeches, hot douches, and poultices, if used properly, will cure without surgery.

So I put in a plea for conservatism in such cases. It is true the operation, if properly done under proper asepsis, is but little dangerous, yet the anesthetic is some risk and the deformity very great. But these cannot be put in the balance with a neglected case, or a delayed operation which might lead to death.

It is stated in *The Hospital* that a memorial hospital for tropical diseases is to be founded in honor of the late Miss Mary Kingsley, and to be called after her name. Mr. A. L. Jones, the chairman of the Liverpool School for Tropical Diseases, has headed a subscription list with $1000; Mr. Blaize, of Lagos, has given $500; and other promises have been made.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE RATIONALIST AND THE ROUTINIST.

Those who have taken to heart the lesson contained in Mr. Kipling's last story—"The Outsider"—will doubly feel the significance of much in the admirable remarks of Dr. Osler at the London Post-Graduate School. He insisted upon the necessity of post-graduate study for enlarging the scope of the practitioner's mental vision. The danger of becoming "insided" by contempt of the outsider is one to which the practitioner of medicine is peculiarly liable. He learned to do all things well from his old teachers. He is apt to become devitalized by the sclerosis of self-sufficiency. English and American students do not move about enough. They acquire local trammels which are a handicap to them by giving them an arrogant sense of superiority often most manifest when there is least warrant for it. To escape from these trammels is often difficult, and many good practitioners find themselves unable to extend their notions of the science of medicine beyond the teachings of their old masters, with whom they seem to think finality had been achieved.

"There are," says Dr. Osler, "two great groups of practitioners, the routinist and the rationalist—neither common in the pure form. Into the clutches of the demon routine the majority of us ultimately come. The mind, like the body, falls only too readily into the rut of oft-repeated experiences. One evening in the far Northwest, beneath the shadows of the Rocky Mountains, we camped beside a small lake, from which paths diverged in all directions, each one as straight as an arrow as far as the eye could reach. They were the ruts or tracks which countless generations of buffaloes had worn in the prairie as they followed each other to and from the water. In our minds countless oft-repeated experiences wear similar ruts, in which we find it is easiest to travel, and out of which many of us never dream of straying."

The rationalist, on the other hand, avoids the buffalo tracks of his predecessors. He approaches a patient as a mathematician does a problem. There is something to be found out in every case, and in every case, however trivial, there is something novel. The rationalist may be just as busy in his practice as the routinist, but he finds time to keep abreast with modern progress in the use of the microscope and stethoscope and other instruments of precision.

Perhaps no one needs the refreshment and renovation of the post-graduate study more than the teacher of medicine. Successful teaching must be dogmatic, but this same dogmatism may react upon the teacher, and unless he be watchful his convictions will petrify into stable equilibrium. After twenty or thirty years of teaching, the new, even when true, often repels.

"These unrefreshed, unregenerate teachers," says Dr. Osler, "are often powerful instruments of harm, and time and again have spread the blight of a blind conservatism in the profession. Safely enthroned in assured positions, men of strong and ardent convictions, with faithful friends and still more faithful students, they too often come within the condemnation of the blind leaders of the blind; of those who would neither themselves enter into the possession of new knowledge, nor suffer those who would to enter."

During the last three centuries the fountain of learning has flowed from different sources. Linacre and his successors brought the new learning from Italy. From Holland a succeeding generation drew rich stores of knowledge. From France came the new science of Bichat, the new art of Laennec. Austria contributed accuracy in clinical methods. The debt of the present generation to Germany can never be paid. Multitudes still find their inspiration in Virchow, and the scientific study of the disease is still proceeding on the lines set forth by his first discoveries. To think, to travel, to read, and above all to keep in contact with young men, are essential to the preservation of true mental activity. Every teacher should try to take every seventh year for recuperation and refreshment at the fountains of knowledge, and so realize with Browning that "to be wide-awake is our best dream."

EDITORIAL NOTES.

The Separation of Conjoined Twins.

The operation recently performed by Dr. C. Prevost, of Rio de Janeiro, was certainly one of the boldest ever known in the annals of surgery. The operation was the separating of the xiphopaginous

twins, Maria and Rosalina. The *x*-rays had shown the children to be united by their two livers to the whole extent of those organs. On operating it was found that not only the livers but also the mesenteries, the pleuræ, and pericardial sacs were connected. The operation involved a frightful loss of blood, and occupied nearly three hours' time. One of the twins made an uninterrupted recovery, while the other died on the sixth day. This operation will stand as one of the greatest efforts of modern surgery, and a tribute to the courage and skill of the operator.

Another Blow to the Antitobacconists.

An incident recently reported in one of the European journals of laryngology shows very beautifully how the much-condemned pipe, or rather the stem thereof, may become a means of saving life. A patient while smoking met with a fall, broke his pipe-stem, and aspirated into the right bronchus a piece of the amber stem, nearly two inches in length. This foreign body remained in the bronchus ten weeks, and was expelled during an attack of cough. Owing to the roomy lumen of the amber tube, air passed through it freely, and no injury to the lungs occurred through its presence. Had this poor man had his tooth brush or lead-pencil in his mouth when he met with this accident, there might have been a fatal turn to subsequent events, and this important testimonial to the value of pipe-smoking would not have been given to history.

Medical and Surgical Aid in China.

War in China must cause reflection as to what possible kind of medical and surgical aid the Chinese are going to give their injured. Surgery will probably be limited to small achievements, although the Chinese are notable for being extremely good subjects for operative work. Inflammation of any kind hardly ever follows surgical intervention. The taking of Chinese medicine must be difficult. A prescription usually contains from ten to sixteen varieties of herbs, flowers, nuts, gums, barks, and roots. Like everything Chinese, medicine is very unwieldy, and this fact must deprive the sick and wounded of its use. This, however, may not be an unmixed evil.

ITEMS AND NOTES.

SMALLPOX at present exists at Nome.

SMALLPOX has broken out in Montreal.

ANTHRAX has made its appearance at Falls Creek, Pa.

IT is reported that smallpox has broken out in Dawson City.

THE plague is reported to have appeared at Asuncion, Paraguay.

IN Japan the average age of the medical graduate is over twenty-six.

THE Prince of Wales has been elected a Fellow of the Royal College of Surgeons.

DURING July there were reported forty-five cases of yellow fever in Havana, of which sixteen died.

THE New York School of Clinical Medicine has not been discontinued, as was reported some time ago.

THE Cornell Medical College is now nearly completed. It has cost, including the site, more than $600,000.

IT is reported that a disease resembling la grippe, and said to be very fatal, prevails on the seal islands in Behring Sea.

UP to the present time it has not been decided where the base hospital for the American army in China will be located.

THE surgeons to the three ships burned at Hoboken all escaped—Dr. Leuthe of the *Bremen*, Dr. Staly of the *Saale*, and Dr. Brauns of the *Main*.

THE physicians and druggists of Hamburg, Germany, have appointed a committee to devise means to check the spread of quackery.

MAJOR J. VAN R. HOFF, who was at the head of the army medical service in Porto Rico, has been selected as chief surgeon of the China expedition.

THE degree of Doctor of Laws has been conferred by Dickinson College and also by the University of Michigan upon Dr. L. S. Pilcher, of Brooklyn, editor of the *Annals of Surgery*.

A SHORT time ago at the Presbyterian Hospital, Philadelphia, Dr. Willard operated for strangulated hernia upon an individual who was one hundred years of age. He made a good recovery.

VISITORS to the International Exposition at Paris will be unusually exposed to typhoid infection. Typhoid fever is at present quite prevalent there, and the water-supply is known to be infected.

AT the centenary celebration of the Royal College of Surgeons, which was held in London on July 26, Drs. W. W. Keen, of Philadelphia, and R. E. Weir, of New York, were given diplomas of honorary fellowship in the college.

BY the will of the late M. Cravat-Durant, of Paris, $30,000 has been left to the Pasteur Institute of Paris, $80,000 to the Oeuvre des Enfants Tuberculeaux of Ormesson, $80,000 to the Society for the Protection of Children, and $30,000 to the town of Fontainebleau for the enlargement of its hospital accommodation, besides large sums for many other charitable purposes connected with Fontainebleau.

IN London, says the *Philadelphia Medical Journal*, there is an odd philanthropic enterprise called the Spectacle Mission. It was founded by Dr. E. J. Warner over ten years ago, and provides spectacles for poor working people suffering from defective sight. Last year over a thousand spectacles were given away by the mission. A subscriber of five shillings receives four spectacle cards for distribution, a ten-shilling subscriber ten cards, and so on. The eyes of each applicant are carefully tested, and the spectacles are new, of good glass, with steel frames. Many a poor working man and woman has been enabled by this mission to retain employment.

THERE has recently been founded, under the name of "The Société d'Assistance Mutuelle des Etudiants Francais et Etrangers," an association the aim of which is to assist students both past and present who have studied at higher educational establishments both in France and abroad, but who are resident in Paris. The society proposes to find for its clients work suited to their particular form of study, such as translations, analyses of various works, bibliographical researches, *précis*, and similar work. The society comprises four classes of members—active members, givers of donations, founders, and honorary members. It is an interesting association and deserves encouragement.

ACCORDING to the *Journal of the American Medical Association*, a chart was made of the city of Sassari, on the Island of Sardinia, showing every cistern, pond, sewer, ditch, trough, etc., which could breed

mosquitoes, and persons were hired to pour petroleum on the surface of the water twice each month. At the same time a vigorous warfare was waged against the mosquitoes in the air by chlorin in cellars, and Celli's "zanzolina" or other insecticides in the houses. The results were completely successful, and establish that it is possible to free a city from mosquitoes unless the conditions are exceptionally unfavorable, as at Venice. The expense for a city of 50,000 inhabitants is about $250, including service.

The *Medical Record* is responsible for the following: "That truth is not less strange than fiction is illustrated by a recent occurrence at the Philadelphia Hospital. Some two years ago a woman was found on the street in a demented and destitute condition, and was sent to the hospital. She could not give her name or any information as to where she had come from. For a long time there was no improvement, but after eighteen months the woman was able to relate something about herself and her family. Her husband was communicated with, and as a result her son came from a distant city to take her home. It turned out that she had disappeared five years before, and large sums of money had been spent in the search for her."

Under the title "Bulletin Quarantenaire de la Semaine" the quarantine department in Alexandria, Egypt, publishes every week all the news relating to plague, cholera, yellow fever, cattle plague, and foot-and-mouth disease. The information extends to many different countries. Plague is reported from Jeddah, Lahidj in Arabia, Bombay, Calcutta, Karachi, Hong Kong, Australia, Japan, Rio de Janeiro, and Buenos Ayres. Bombay and Calcutta alone are responsible for cholera, while yellow fever is known at Panama, Havana, Santos, Mexico, and Brazil. Of the returning pilgrims from the Hedjaz, 291 have now been treated at the Tor Hospital, of whom 107 died from ordinary maladies and 184 were cured. The chief disease is dysentery.

According to the *Journal of the American Medical Association*, the disturbances in China and the peril of foreigners render peculiarly interesting Dr. Matignon's recently published work "Superstition, Crime et Mèsere en Chine." Our *confrère* has been attached to the French legation at Pekin for a number of years, and has had peculiar opportunities for studying the inner life of the people. He states that the Chinese, from the highest to the lowest, are superstitious to an absolutely inconceivable extent. Every act of their life, even the most trivial, is shackled by geomancy, necromancy, sorcery, the evil-eye, and other childishnesses. The higher classes claim to be above these superstitions, but in private they are as credulous as the most ignorant coolie.

According to the *Philadelphia Medical Journal*, the statistics of the medical profession in Italy present something of the same state of overcrowding as elsewhere in the world. In 1876–7 there were 2035 students of medicine; in 1896–7 there were 6922. But it is puzzling to note that while the number of practicing physicians in 1878 was 18,044, their number was only 20,000 in 1899. About 900 men leave the universities yearly, but only about 500 physicians are reported as dying in the same limit. In Italy there are some 9000 medici-condotti, or town-physicians (or health officers); of these about 5000 have a yearly salary, which in only 500 cases exceeds 3000 lire a year. Some of the others, however, receive small stipends from the richer families of their districts.

Dr. Poncet, of Lyons, recently communicated to the Academy of Medicine the results of researches made on the present distribution of goitre in France. He estimates the number of goitrous persons roughly as between 375,000 and 400,000. These are not by any means evenly distributed all over the country; on the contrary, a small group of departments are responsible for an unduly large proportion, notably those bordering on the Alps, the Pyrenees, the Jura, the Vosges, and lastly, the central plateau. The departments of the Aisne and the Ome alone show up as black spots in otherwise unaffected districts. He states that the number of goitrous persons has notably diminished, especially during the last fifty years, but the distribution has not undergone any marked change.

According to the *Indian Medical Record*, more people over one hundred years old are found in mild climates than in the higher latitudes. According to the last German census, in a population of 55,000,000, only 78 have passed the hundredth year. France, with a population of 40,000,000, has 213 centenarians. In England there are 146; in Ireland, 578; in Scotland, 46; in Sweden, 10; in Norway, 23; in Belgium, 5; in Denmark, 2; and in Switzerland none. Spain, with a population of 18,000,000, has 401 persons over one hundred years of age. Of the 2,250,000 inhabitants of Servia, 575 have passed the century mark. It is said that the oldest person living is Bruno Cotrim, born in Africa, and now living in Rio de Janeiro. He is 150 years old. A coachman in Moscow has lived for 140 years.

The *Medical Record* says that the city of Philadelphia can now, in consequence of the settlement of all litigation over the will of Dr. Evans, the American dentist who practiced in Paris for nearly half a century, proceed with the founding and establishing of the Thomas W. Evans Dental Institute and Museum. The institution

has been incorporated, and it will be built on property that belonged to the testator in Philadelphia. About $3,000,000 will be devoted to the structure and its equipment and endowment. Dr. Evans left an estate amounting to a little over $4,000,000, one-quarter of which goes, under the terms of the settlement, to the direct legatees, mentioned in the will for smaller sums, and the remainder to the foundation and endowment of the Dental Institute and Museum.

According to the *Medical Record*, there has been organized at the International Hospital, 95 Boulevard Arago, Paris, a system whereby all French and foreign physicians may hold clinics, lectures, and scientific demonstrations without cost to themselves. The idea which has led to the establishment of this service of conferences is that, owing to the great number of international congresses to be held in Paris, the attendance of medical men will be very large. Many of these will have demonstrations to make for which there will be little or no time in the section meetings, and it is for the accommodation of such that the extra service has been organized. Those desiring to avail themselves of this are requested to communicate with the organizer of the conferences, Dr. S. Bernheim, No. 9 Rue Rougemont, Paris.

The *London Chronicle* states that great interest has been aroused in Germany by the alleged discovery of a specific against morphinism by Dr. Otto Emmerich, of Baden-Baden. It is a distilled vegetable oil of intense acidity, two or three drops of which is taken internally daily. In from three to six weeks the patient acquires an intense loathing for the use of the drug. It is claimed for the discovery that it has proved infallible in numerous cases. Dr. Robert Koch, who for some months past has been in German New Guinea, with the object of studying malarial disease, has sent home a report, in which he states that he has been able to protect himself and his colleagues against malaria, and expresses the hope that his investigations will materially assist in combating this disease. His treatment of the white population, as well as of the natives, has resulted in freeing them from malarial symptoms.

The *British Medical Journal* is authority for the following: According to the bills of mortality published every month under the auspices of the Greek Ministry of the Interior, the disease which claims the largest number of victims in the towns of that country is tuberculosis. Of 261 deaths recorded in Athens in December, 1899, 33 were due to tuberculosis. Another noteworthy point in the mortality of Greek towns of more than 10,000 inhabitants is

the great disproportion between the number of male and of female deaths. Thus, at Athens, of the 261 deaths in the month referred to, only 94 were those of women; of 71 persons who died at Corfu, 31 were women; of 41 at Syria, 25 were men; of 36 at Pyrgos, 21 were men. In only one town, namely, Larissa, did the number of women who died exceed that of the men; there, out of a total of 43 deaths, 24 were women.

The Lancet of May 26 says: "We are indebted to an esteemed correspondent for the following extract from a letter from a field officer of a distinguished regiment: 'I do not know which has been the most admired out here—the wonderful organization for the comfort and removal of the sick and wounded, or the extraordinary personal gallantry under fire of the medical officers; and I can assure you the fire has been hot. I have known medical officers, who had no right to be there, borrow ponies and ride upward of thirty miles to a fight, and then saunter into the firing line just to tie up the wounded. I do not suppose every medical officer is a hero a bit more than every officer of my regiment, but there seems to be something wonderfully fine in a profession that lifts men so entirely above all apparent sense of personal danger. You may well be proud of the medical officers of the army, for their devotion has been a source of comment and praise not only among officers but men.'"

The Moscow Society of Physiologists, a branch of the Imperial Society of Friends of Natural Science, has undertaken to issue a journal entitled *Le Physiologiste Russe* which is intended to make the work of members of the society in physiology, physiological chemistry, histology, embryology, general pathology, and pharmacology known to that large section of the scientific world to which Russian is an unknown tongue. Original papers will be published in French or German; and summaries of all Russian work appearing elsewhere will be given in French. The first volume, which has already been issued, contains papers from the laboratories of Moscow, St. Petersburg, Warsaw, and Tomsk. Among the writers are Professor Morokowitz, head of the Physiological Institute of Moscow, and editor of the journal; Professors Setschenow, Bogdanoff, Salaskine, Chalfeieff, and Kulagin. *Le Physiologiste Russe* is sent gratuitously to all institutes of physiology, pathology, and pharmacology.

It is estimated that there are about 400 lepers in France. They are scattered about in Brittany, in the Pyrenees, on the shores of the Mediterranean, and in Paris, where they number 150. Among the lepers there are missionaries and nurses who have fallen victims to

their devoted care of sufferers in other countries, and officials and soldiers who have contracted the disease in the colonies. An anti-leprosy committee has recently been formed on the initiative of Dom Santon, a member of the Benedictine Community of Liguge, who is also a doctor of medicine, for the care of the lepers in France and the prevention of the spread of the disease. Dom Santon has for many years past devoted himself to the study of leprosy, traveling for that purpose in many parts of the world. After conference with the Council of Hygiene he has acquired a property in the Vosges, where he proposes to establish an asylum for lepers to be called the St. Martin Sanatorium. The plans have been approved by the French government.

Dr. Engel Bey, in a continuation of his summary of the statistics of the towns of Lower Egypt for the period 1886–90 (*British Medical Journal*), presents elaborate tables and diagrams illustrative of the mortality of infants under five years of age. He finds that the mortality reckoned on births (for census bases are not available) of the first year of life compares favorably with that of European cities, whereas the mortality of the succeeding years, especially of the second and third, is much higher. This is due to deaths caused by digestive and respiratory diseases and by measles, which he holds accountable for much of the stomach and chest troubles so prominent in the returns. The mortality of the first year is higher than that of the succeeding years, which present the normal progressive decrease. When these later years give unusually high figures, the result is due to the excessive prevalence of measles. Scarlatina is almost unknown in Egypt, and both diphtheria and whooping-cough, which account for many deaths, occur mostly during the first year of life.

The Berlin correspondent of the *British Medical Journal* says: "We have reason to thank the Social-Democrat newspaper *Vorwärts* for dragging into light the 'experiments' made by Dr. Stubell (first assistant in Professor Stinzing's clinic at Jena) on patients suffering from diabetes insipidus, and published by him in the *Archiv für Klinische Medizin.* Dr. Stubell there relates how he kept one of his patients in an attic with barred windows, the door of which he locked, putting the key in his pocket; how the patient, who was allowed only a very small amount of liquid, in the torturing thirst which is a symptom of the disease, drank his washing water, so that he was then no longer allowed to wash himself; how one night, in his agony, he drank about 1400 cubic centimeters of his own urine; how another night he wrenched off one of his window bars, climbed over the roof to another small window, through which he crept, thus finding his way to a water-tap, where he was captured and brought back to his prison.

Dr. Stubell calmly states that his patient must have 'endured frightful tortures' one night, and gives the following account of his condition in the morning: 'The patient was quite collapsed, his face seemed dried up, eyes and cheeks deeply sunken, pulse almost imperceptible, a great deal of pain, the joints stiff.' The whole medical profession must reprobate cruelties such as these perpetrated in the name of science."

JULIAN RALPH says in the *London Daily Mail:* "I am able to bear out much of the worst Mr. Burdett-Coutts has written about the sick and wounded with the army in South Africa. All, however, tend to confirm the results of his experience. In Bloemfontein there were twenty-five hundred enteric patients when I left, and they were in a large proportion left to lie on the ground and be nursed by ignorant and slovenly 'Tommy' attendants. They lay in the water, they were rained on, and the sanitary arrangements were such that, at least in some hospitals, they had to leave their blankets at the risk of death. All the time I was at Bloemfontein I was haunted by the horror of the neglect of and cruelty to the sick. When I was at Kimberly, some of the local physicians were similarly horror-stricken by the condition in which the wounded came to them, trundled over the bad roads all the way from Paardeberg in ox wagons. I have no hesitation in saying that I consider the treatment of the sick and wounded (especially after the main advance from Modder River) primitive, cruel, and almost barbaric, as well as needless and inexcusable."

M. ZAMBACO, of Constantinople, recently showed before the Paris Academy of Medicine a series of photographs of human bones collected in Upper Egypt and dating back some 8000 years. Alterations of a destructive or hypertrophic nature, such as suppurative osteitis, exostoses, eburnated surfaces, and the like, were evident upon the bones of the skull, the limbs, and the vertebral column. Some of these M. Zambaco considers were due to syphilis, and others to tuberculosis. M. Fournier said he did not consider that the lesions of which M. Zambaco had shown photographs gave any definite evidence of having been caused by syphilis. It is next door to impossible to affirm the existence of syphilis simply from the alterations exhibited by the bones, for a variety of diseases give rise to alterations in the bones exactly similar to those produced by syphilis. Not only do ordinary injuries give rise to exostoses exactly comparable to those produced by syphilis, but varicose ulcers give rise to hyperostosis of the tibia at the border of the ulcer which differs in no way from syphilitic periostitis. M. Fournier, therefore, is of opinion that a simple inspection of a bony lesion is not enough to enable the observer to determine its origin.

NEW PUBLICATIONS.

PRACTICAL MEDICINE.

Curative medicine being assumed to be the final and avowed object of the practitioner, Professor Thompson has written this book with this purpose constantly in mind. His work is a presentation of the modern status of medical practice, and the facts and principles of the science have been set forth clearly and simply. Particular care has been given to the therapeutical sections, and a practical and clinical spirit pervades the whole, which will surely win the favor of the discerning reader. Illustrations, for the most collected from the author's own cases, accompany the text. As a manual of practical medicine, the work amply fulfils its promises, and students and practitioners possessing it can commence the new century with a work which includes all the essential facts of medicine now known to science.

A Text-book of Practical Medicine. By William Gilman Thompson, M.D., Professor of Medicine in Cornell University Medical College, New York City; Physician to the Presbyterian and Bellevue Hospitals, New York. In One Magnificent Octavo Volume of 1010 Pages, with 79 Engravings. Cloth. $5.00, net; leather, $6.00, net; half morocco, $6.50, net. Philadelphia: Lea Brothers & Co.

FRACTURES.

The application of the Roentgen rays to surgery has been the means of making necessary the revision of all text-books dealing with fractures and dislocations. Dr. Beck's recent work is probably the most substantial and systematic treatise on fractures based upon *x*-ray experience. Inasmuch as the after-treatment of fractures must be predicated on a thorough recognition of the anatomical relation of the continuity of the bones, the precise differentiation which is insured by the *x*-ray is extremely valuable. Dr. Beck's book abounds with skiagrams illustrating every conceivable variety of fracture in actual experience. The treatment of these fractures is determined by the ability of the proposed proceeding to meet certain conditions that can be demonstrated to be present by ocular observation. The work is admirably presented to the reader, and nothing further can be desired in the way of make-up and typography.

Fractures. By Carl Beck, M.D. With an Appendix on the Practical Use of the Roentgen Rays. 178 Illustrations. Philadelphia: W. B. Saunders & Co., 1900.

GOLDEN RULES OF OPHTHALMIC PRACTICE.

The Golden Rules Series still continues to delight the reader with its brief but pithy epitome of the facts of medical practice. The last number is an ophthalmological one, and fully maintains the high standard of excellence achieved by its predecessors.

Golden Rules of Ophthalmic Practice. By Gustavus Hartridge, F.R.C.S., etc. "Golden Rules" Series No. VII. John Wright & Co., Bristol; Simpkin, Marshall, Hamilton, Kent & Co., Ltd.

OBSTETRICAL TECHNIQUE.

This little work is written purely in the interest of the general practitioner. The hospital idea has been eliminated from the book, and the photographs and engravings are designed to illustrate the methods that must prevail in the every day conduct of

cases. The preparation of an aseptic chamber for the purposes of accouchement is a matter which cannot be accomplished in an ordinary house without some careful preparation, but the better results the obstetrician will obtain by doing this will fully repay him the effort. This excellent little book is purely practical and clinical in spirit, and it would be difficult to find a manual which could with greater confidence be placed in the hands of the novitiate.

A Manual of Obstetrical Technique as Applied to Private Practice. With a Chapter on Abortion, Premature Labor, and Curettage. By Joseph Brown Cooke, M.D., New York. Philadelphia and London: J. B. Lippincott Company, 1900.

OPERATIVE SURGERY.

The popularity of this well known manual of operative surgery is in nowise on the wane. The new edition will appeal to the needs of all students and practitioners seeking a thoroughly practical guide to operative work. The descriptive matter of the work is the very essence of the subject. It is doubtful if any manual gives directions to the operator in such clear and concise terms. The elimination of all that is unessential seems at all times to be the authors' aim, and the present edition is somewhat reduced in size from its predecessors, owing to the discarding of some forty cuts which seemed to have outlived their usefulness. The manual is a thoroughly modern text-book of applied surgical science.

A Manual of Operative Surgery. By Lewis A. Stimson, B.A., M.D., and John Rogers, Jr., B.A., M.D. Fourth and Revised Edition. With Two Hundred and Ninety-three Illustrations. Philadelphia: Lea Brothers & Co., 1900.

HYPNOTISM.

This little book contains the directions of a professional hypnotist for inducing the hypnotic state. It is not a book that will take high scientific rank, but will be valuable for certain practical suggestions which the writer gives. The literary style of the work is very bad, and it is to be regretted that the author did not submit his manuscript for revision before asking intelligent people to read it.

Hypnotism. A Complete System of Method, Application, and Use, Including All that is Known in the Art and Practice of Mesmerism and Mental Healing. Prepared for the Self-instruction of Beginners as well as for the Use of Advanced Students and Practitioners. By L. W. De Laurence, Professional Hypnotist and Magnetic Healer. Illustrated. Chicago: Alhambra Book Company, Publishers.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Care of Patients During Surgical Operations; with Some Methods of Preventing Shock and Infection.

From his experience, F. B. Turck (*Medical Record*, Aug. 11, 1900) draws the following conclusions:

1. Pathogenic and non-pathogenic bacteria, found on and in the skin before and during surgical operations, may produce infection.

2. The skin, especially in abdominal operations, is a source of infection that may cause death, though all usual precautions are particularly taken. Susceptibility to infection is produced in cases of lowered vitality and weakened condition, or in cases in which shock is present, from whatever cause, in a mild or severe form.

3. The present methods yet in use, of towels and laparotomy sheets, do not sufficiently protect the field of operation.

4. The use of the rubber protector which is made to fit close to the skin more thoroughly prevents the danger of infection from the skin, and also lessens the liability of the skin becoming contaminated from the escape of visceral contents, pus, or other infected material occurring during the operation.

5. The peritoneum may become infected from the escape of visceral contents, or from any infected cavity opened during surgical operations in the abdomen. Infection may result even after the most careful precautions are taken, notwithstanding the use of gauze and careful packing, now in common use.

6. When death occurs from supposed "shock" or "exhaustion," especially when the viscera have been exposed to dangers of infection by the escape of visceral contents, the death is probably due more to the infection than to "shock" or "exhaustion."

7. Whenever practicable, the viscera may be drawn through the small openings of the protective rubber shield overlapping the abdominal wound, and absolute protection to the abdominal cavity is secured.

8. Exposed viscera may be covered with a rubber hood, and kept warm by small rubber hot-water bags, thus preventing contamination as well as lessening susceptibility to infection.

9. Animals naturally immune to certain bacteria are rendered susceptible by exposure of the viscera to air for one hour or more.

10. Susceptibility can also be produced in an animal naturally

immune by long manipulation of the abdominal viscera, notwithstanding all ordinary precautions are taken. Visible trauma is not essential.

11. In animals in which susceptibility is not artificially produced, only slight effects are observed after intraperitoneal inoculation of microorganisms taken from the skin before surgical operations.

12. When an animal is rendered susceptible by exposure of the viscera to air, pathogenic and many non-pathogenic microorganisms inoculated may cause infection, followed by death.

13. Subcutaneous or intravenous infusion of physiological salt solution does not materially render the animal less susceptible, after the exposure and manipulation of the viscera.

14. When heat at 48° or 50° C. is applied within the abdominal cavity during the time corresponding to the exposure and manipulation of the viscera (about one hour), inoculation by pathogenic or non-pathogenic germs seldom results in infection and death.

15. If infection does occur, death is delayed, or seems prevented, as a result of the procedure described. Susceptibility to infection is not materially decreased by the external application of heat.

16. Hot-water bags placed in the abdominal cavity during an operation prevent shock or collapse, and also produce a modified immunity or lessen the susceptibility to infection.

17. In severe operations, when extreme shock or collapse is present, resuscitation is best accomplished by the application of heat within the stomach and abdominal cavity.

Submucous Ligature for Rectal Hemorrhoids.

This operation, says B. M. Ricketts (*Medical Review of Reviews*, July 25, 1900), is very much simplified by a large needle describing more than a semicircle, carrying a moderate size kangaroo tendon submucously around the varices, which occupy the rectum as much as three inches above the mucocutaneous border.

The three hemorrhoidal vessels, arterial and venous, enter the rectum and perforate the rectal muscular tissue about three and a half inches above the sphincter ani. Great difficulty has been experienced in passing the needle to complete the entire circle submucously. To overcome this the needle is brought out at a point corresponding to one-half of the circle, again to enter at its point of exit, and then to pass out at the point of primary entrance. In cases of but one or two hemorrhoids one ligature of this character is sufficient. If there are many hemorrhoids occupying the entire circumference of the rectum, as many of those submucous ligatures may be applied as are necessary. Then, too, it is not necessary to incorporate all of the varices

within the ligature, because many of those which are not so constricted by the ligature will become so as a result of the trophic changes which ensue. Sometimes it will be found most convenient to introduce all of the ligatures before making them taut. By doing this the introduction of the needle is made with greater ease. Before this work is attempted the sphincter ani should be divulsed to the fullest degree with the fingers. Divulsion once completed, the hemorrhoids will at once protrude and are more easily encircled by the ligature. As soon as the ligatures are made taut they (the hemorrhoids) are inverted into the rectum. Sometimes it is desirable to puncture some of the larger ones that the distention may not be so great, and for the purpose of lessening the amount of hypertrophied tissue within the rectum. After a few weeks atrophy takes place to such a degree as to allow the sphincter ani to resume its normal tonicity and to completely destroy all the objectionable varices which formerly existed. The advantages of this operation are:

1. The impossibility of secondary hemorrhage.
2. There is no tissue destroyed or sacrificed.
3. The loss of time is but little, if any, greater than when they are removed by the clamp and cautery.
4. Thus far there has been no infection.
5. There have been no fistulæ, abscesses, or fissures resulting therefrom.
6. The pain is no greater, and perhaps less, than in other methods of ligaturing.
7. There is absolutely no stenosis.

Raised from the Dead.

Two cases of momentary resurrection were reported by M. Tuffier at a recent meeting of the Paris Académie de Médecine (*Medical Press*, July 25, 1900). One, that of a young man aged twenty-four, had been operated on for appendicitis. Four days after the operation he was seized with syncope, and M. Tuffier, who had been the operator, having assured himself that the heart had ceased absolutely to beat, employed the means usual in such cases—artificial respiration, traction of the tongue—but without effect. Seeing that the case was hopeless, M. Tuffier slit up the third intercostal space, opened the pericardium, and seizing the heart in both hands he made from sixty to eighty rhythmical compressions. In a short time the pulse began to beat, the dead man opened his eyes, stirred his head, and recognized even the operator. But at the end of two or three minutes the pulse became weaker and ceased for the second time. The compressions were renewed with temporary success, while a third attempt failed

completely. The autopsy revealed the cause of the failure. The pulmonary artery was blocked by an embolus. M. Tuffier believed that were it not for that clot the experiment would have succeeded.

The second case was that of a man who, in the course of an operation for intracranial abscess, succumbed, doubtless from the chloroform. Every means was naturally tried, but without effect. The spectators had quitted the theater, but the surgeon (M. Marion) continued the operation and exposed the brain. Already more than twenty minutes had elapsed since the patient had ceased breathing. Passing the fingers into the cranial cavity, M. Marion touched, as by accident, the bulb, and immediately, to the surprise of the assistants, the dead man heaved a deep sigh. When the finger was withdrawn, the respiration ceased instantly. Repeating the operation with regularity, the surgeon had the satisfaction of seeing his patient come back to life. He again succumbed, however, forty-eight hours after from an abscess.

The Evidences of Prostatic Atrophy After Castration.

E. L. Keyes (*Medical Record*, July 21, 1900) sums up his article as follows:

1. Experiments, whether on man or the lower animals, relating to the normal prostate do not of necessity apply to the enlarged prostate.

2. There is no direct pathological evidence that castration has ever caused atrophy of a hypertrophied prostate.

3. There is direct pathological evidence that in a few cases castration has failed to cause atrophy of the hypertrophied prostate.

4. The majority of cases reported thus far have been labeled "cured" or "improved" so soon after operation that many of them are doubtless instances of local depletion.

5. Clinical evidence of this is afforded by relapses occurring months after the operation.

6. Of the permanent cures some may well be instances of permanent advantage derived from reduced congestion.

7. The clinical evidence as to the actual atrophy of the prostate after castration lacks, as yet, its scientific confirmation, and has failed thus far to prove its title to the surgeon's credence.

Traumatism and Infection.

In his address before the International Medical Congress recently opened in Paris, Prof. Rudolf Virchow (*Medical Record*, Aug. 4, 1900) took for his subject the relation of bacterial infection and traumatism.

A trauma, he said, becomes harmful to the organism when it opens a portal for the admission of pathogenic microorganisms, and when it so weakens the individual cells of the tissues that they are unable to overcome the microbes. All is not over when the specific bacteria has invaded the organism, for then begins the struggle between them and the vital cells of the body, a struggle which is called disease. If the intruders are too strong, either absolutely by reason of their invincible virulence or their overwhelming numbers, or relatively because of the weakened resisting power of the cells, the latter are more or less speedily overpowered, the organism succumbs in the unequal contest, and disease results in death. If, on the other hand, the microorganisms are present in attenuated form or in small numbers, and the cells are in the enjoyment of their normal vital activity and have not been paralyzed by the shock of the initial injury, then the invading bacteria are vanquished and infectious disease is at an end. The province of medicine is to aid these cells in repelling the assaults of the invading hordes by whatever will strengthen the cells or weaken the microbes.

Cancer of the Uterus.

L. Frank (*Louisiana Monthly Journal of Medicine and Surgery*, July, 1900) says that it has not been sufficiently proven that cancer is of bacterial origin. There is no question but cancer is on the increase, and the laity should be educated as to a proper appreciation of the prevention of cancer and its cure by early diagnosis and operation. The only absolute means of early diagnosis is the microscope. The mortality-rate and recurrences can be lessened by early operation. Cancer of the uterus can often be prevented by trachelorrhaphy.

MEDICINE.

Chinese Impassiveness.

A. H. Smith (*Indian Lancet*, June 1, 1900) in the hospital reports of Tien-tsin gives the following as an example of the impassiveness of the Chinese:

"A coolie lost his leg; a few weeks after his discharge he had another accident—smashed his hand and received 'awful injuries' on head and body. His comrades thought the case hopeless, and threw him aside. For hours he lay in the blaze of sunshine. A good mandarin passing by requisitioned a cart and ordered some men to take him to the hospital. As soon as the mandarin was out of sight they tossed him into a ditch. He crawled 500 yards to a shop by the way-

side, and hid in a meal basket. There the shopkeeper found him presently and carried him to the hospital. He was a confirmed opium smoker; we are told, nevertheless, that 'no bad symptoms' arose. All his wounds healed without a pause, and the poor fellow left in four weeks after admittance, to seek such employment as was open to a coolie who had lost one hand and one leg. But Chinamen should not be healthy subjects according to the rules laid down by doctors, or, indeed, by common sense and experience in Europe. They are dirty in person and habits; the atmosphere they love is the foulest possible. If rich, they eat complicated messes, and if poor, any offal is devoured with joy. A large proportion of them smoke opium. Perhaps our nerves check the healing process. We cannot help thinking and fretting when hurt. A Chinaman has no imagination; he lies still of mind as of body, giving nature every chance. In our own experience a coolie smashed a soda-water bottle, loaded a gun with the fragments, and discharged it into his breast, because the keeper of the opium shop refused him more credit. As he lay extended on a charpoy, the doctor tapped with his knuckle all round the small black hole, watching for a start of agony as one of the bits of glass was touched. But there was no change in the yellow face, not a blink in the hard little eyes which stared at us unceasingly. At each rap the doctor asked whether it hurt; receiving no answer, he called the man's attention by a gentle pull at his queue, and repeated the question. 'Yes, it hurts,' the Chinaman replied at length; 'I have a sore head.' The pain caused by those tappings must have been horrible; of the pull at his hair he could only just be conscious. But if a Chinaman be capable of feeling sentiment, it is for his pigtail. The other twinges he regarded as a matter of course."

Diphtheria of the Stomach and Bowels.

Schoedel (*Münch. Med. Woch.*, No. 26) reports a case of diphtheria in which the existence of typical exudate was discovered upon the gastric mucous membrane, despite the current belief that the acid secretions of the stomach should destroy the casually swallowed bacilli. He refers to two cases in which he obtained from the seemingly normal stomachs of children who had died of laryngeal diphtheria, virulent cultures of diphtheritic bacilli.

Further research enabled Schoedel to discover Loeffler's bacillus in the lower end of the small intestine and to secure a live culture of the same.

Even fecal dejections of diphtheritic patients have shown active Loeffler bacilli, and in one case at least, out of eight, it was possible

by Neisser's method of staining to demonstrate a diphtheritic organism.

Gastric juice as a rule destroys small quantities of accidentally swallowed Loeffler's bacilli, so that the occurrence of primary gastric diphtheria is, to say the least, improbable. But in case of original infection of the fauces or the upper air-passages, in which the secretion of hydrochloric acid becomes reduced, as occurs in all infectious diseases, the patient becomes exposed to either of two possibilities—gastric diphtheria or propagation of the diphtheritic process into the bowels.

Referring to the occurrence of virulent Loeffler's bacilli in above excreta, Schoedel calls attention to the possible danger of contagion from that source, and suggests systematic disinfection of dejecta such as is usual in cases of typhoid fever or cholera.

Early Diagnosis of Tuberculosis.

Strauss (*Berl. Klin. Woch.*, June 18, 1900) recommends a careful study of both apices and infraclavicular regions by compared inspection, and emphasizes Aufrecht's statement that patients threatened with tuberculosis often show a lowering of the acromial extremity of one clavicle (mostly on the right side) as compared with the other side. During this inspection the patient should allow both arms to hang down evenly, and adopt the abdominal type of breathing.

As to examination by percussion, the topographic changes noted are often more significant than the qualitative. Kronig and Senator have emphasized this statement, and the latter lays particular stress upon the extent of apical excursion during maximal expiration (expiratory straining with occluded glottis). Atrophy of the apices is more easily discovered than condensation of tissue. Shortened, yet tympanitic, resonance is of considerable diagnostic value. Birch-Hirschfeld holds that the very first lesions appear as a rule in the posterior portion of the right apex. Strauss has derived considerable diagnostic help from the use of iodide of potassium in 2.5-per-cent solution, of which he gave one tablespoonful three times a day, according to Sticker's method, and which increases bronchial secretions incident upon pre-existing irritations.

Strauss lays particular stress upon loss of weight and thermometric oscillations, and recommends taking the patient's temperature every three hours for the duration of one week. Nor should a timely laryngoscopic examination be neglected, while if it should become imperative to perfect the diagnosis tuberculin should be injected (one centigramme, however, being the extreme limit).

How is Plague Spread?

Walter Wyman, in the Public Health Reports for March, 1900, answers certain questions put to him by the Louisiana State Board of Health. He says:

1. As far as known, rats do not carry the plague without being affected by it.

2. It is possible that a germ may be in the fur of the rat and the animal not be sick with the disease. It is probable that the rat would soon infect itself from this source, because of its habit of dressing its fur.

3. Viability of the plague bacillus outside of the body is a disputed question.

4. The German Plague Commission states that the organism will die out in four days. Experiments in the hygienic laboratory of this service show that the bacillus of plague lived at the end of twenty-one days on a piece of fabric, dried and kept in a cool dark place.

5. According to the work of Batzuroff, rats are infected when the bacillus is conveyed by plague cultures, but it is not likely that the organism lives in the intestinal canal of a healthy rat.

6. It is not positively known that fleas infected with plague may live on a healthy rat without infecting it. In the Marine Hospital Hygienic Laboratory fleas from plague-sick guinea-pigs were found to carry the bacillus in virulent form.

Transmission of Tuberculosis Through the Meat and Milk Supply.

J. J. Repp (*Philadelphia Medical Journal*, Aug. 11, 1900) says that tuberculosis may be transmitted to animals through their eating meat of certain other animals which is tuberculous, or by their being inoculated with it; that tuberculosis may be transmitted to animals through their ingestion of the milk of certain cows which are tuberculous, or by being inoculated with it, both when the udder of the cow is diseased and when it is healthy; that therefore the meat and milk of certain tuberculous animals contain living virulent tubercle bacilli, and that the tubercle bacilli of cattle are pathogenic for man; that therefore the meat and milk of certain tuberculous animals are capable of producing tuberculosis in human beings who use these products as food. The meat of all food animals, especially cattle, is unfit for food when the animal is highly tuberculous, but is safe for food when the animal is only slightly or moderately tuberculous, especially so if the meat is well cooked, provided the tubercular tissues are eliminated. The milk of all cows with diseased udders is always dangerous for food,

unless it is well sterilized. The milk of tuberculous cows with healthy udders is sometimes dangerous for food unless well sterilized. Tuberculous cows may be kept for breeding purposes provided they are isolated even from their own offspring, and their product sterilized before use.

The Diazo-reaction as an Aid to Prognosis in Tuberculosis.

Michaelis (*Berl. Klin. Woch.*, March 26, 1900) finds that the diazo-reaction of Ehrlich is of value as a prognostic indication in cases of pulmonary tuberculosis, and that when the reaction is present it renders the prognosis grave. From a large number of observations made on phthisical patients he had found that in 167 cases of the disease 111 gave a positive diazo-reaction, and 56 gave no reaction. Of the latter class 5 patients were cured, 44 improved, 5 were unchanged, and 3 died. In the group of cases which gave the diazo-reaction the mortality was greater and the improvement smaller. Thus, of 111 patients 30 died, 13 were not improved, and 15 were improved, while none were cured.

A Case of Acetanilid Habit.

G. W. Gaines (*New Orleans Medical and Surgical Journal*, July, 1900) reports the case of a negro adult suffering from rheumatism, who a few years ago had acetanilid prescribed for his relief. He found that he was relieved by its administration, but on leaving off the medicine for a few days the pain returned, so he began taking it constantly each day. Now he uses two ounces each week, and has been doing this for some months. The writer fails to state whether the individual suffers any ill effects from this habit.

THERAPEUTICS.

The Use of Opium in the Summer Diarrheas of Children.

In the summer diarrheas of children, F. M. Crandall (*International Medical Magazine*, July, 1900) says that opium is contraindicated (1) in the first stages of acute diarrhea, before the intestinal canal has been freed from decomposing matter; (2) when the passages are infrequent or of bad odor; (3) when there is a high temperature or cerebral symptoms are present; (4) when its use is followed by elevation of temperature or the passages become more offensive.

It is indicated (1) when the passages are very frequent, with pain; (2) when the passages are excessively frequent, large, and watery;

(3) in dysenteric diarrhea, preceded by castor oil or a saline; (4) in late stages, with small, frequent, nagging passages; (5) when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach.

The method of administration is of decided importance. The opiate should not be added to the ordinary diarrhea mixture, which is usually repeated at short intervals. It should be given alone. The dose can thus be regulated with much more certainty. This permits of the diarrhea mixture being largely increased if the exigencies of the case require. Intervals should be sufficient to permit the effect to partially subside before the dose is repeated. They should rarely be less than three hours, while four hours is more commonly advantageous.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Nature of the Physics of Odors—A New Hypothesis.

Before the French Academy of Sciences Vaschide and van Melle offered a thesis with the above title (*La Presse Médicale*). Their ideas are certainly novel and interesting. They state that the sense of smell is not produced by contact between particles detached from odoriferous substances and the terminations of the olfactory organs, but indirectly by means of rays of short wave length, analogous to but not the same as those which we believe give rise to light, heat, and the Roentgen phenomena. The following are the principal arguments in favor of this thesis:

1. The history of science forces on us the conclusion that sensations are produced not directly by substances, but rather by the surrounding medium.

2. The olfactory nerves have the same cerebral origin as the optic nerves, and probably resemble them as to function.

3. Chemical odoriferous substances, which belong to the same group, resemble one another in their spectra.

4. Odors have the quality of absorbing radiant heat, which proves that there is an intimate relationship between odors and heat rays.

5. Many bodies from which particles are given off have no smell, while it is impossible to prove that many others with strong smells give off any particles.

6. Some bodies, each having a strong smell, when placed together antagonize each other so as to produce no smell. This is analogous to placing a hot and a cold body together.

7. The power of stuffs to absorb smells varies with their colors.

8. The sense of smell may be fatigued on one smell, remaining intact for all other odors, just as the eye may be fatigued for one color yet remain active for all other colors.

9. Air is not the only vehicle for odors, for the authors' experiments prove that one can smell quite well with the nares full of an odoriferous fluid.—*Journal of Laryngology*, vol. xv, No. 7.

Disease of the Nose as a Cause of Chronic Occlusion of the Lacrimal Canal.

In previous articles which have appeared upon this subject authors have always spoken of hypertrophy of the inferior turbinated body as causing in the inferior meatus a damming back of the lacrimal secretion. Rischawy (*Monats. für Ohrenh.*, No. 3, vol. xxxiv) shows, however, that the middle turbinated body, if it is much hypertrophied, can compress the ductus nasolacrimalis. Though the middle turbinated body is in apposition with the bony wall, still just above it at the junction between the processus lacrimalis of the turbinated body and the lacrimal bone, and also the uncinate process, the duct here is so thinly protected as to be easily closed. The therapeutic success which Rischawy has attained by removing the middle turbinated body strongly indicates the truth of his theory. He recommends that a patient complaining of occlusion of the lacrimal duct should first have his nasal cavity examined in order that anything therein preventing the flow of the tears may be removed.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Hereditary Optic Atrophy.

C. S. Hawkes (*Australasian Medical Gazette*, June 20, 1900) reports two cases in which optic atrophy seemed to follow in the female line, but affected only the males. The heredity in these cases is rather striking, as showing the transmission of the defect through the female line, but involving males almost exclusively. The writer was able to follow both cases for four generations. In the first, the female had five children, all males but one, of two of whom the history is not known; the other two males became blind at the age of thirty. The female child was not affected; she married, and has nine children, five of whom are females and unaffected; three are unmarried, and one is married and has three male children, the oldest nineteen, none as yet affected. Two males became blind at the ages of fifteen and forty-

eight respectively; one, at present twenty-eight years of age, is not blind. One female married and has two male and three female children; both the males and one female have become blind. The second family history is even more striking in some respects. A married B, who is said to have become blind. They had three children—two males, both of whom are blind, and one girl. The girl married and had five children—four males, all blind, and one female not affected, who in turn had two children, both males, and both blind.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Treatment of Malignant Diseases of the Skin.

In the discussion of malignant diseases of the skin at the annual meeting of the American Dermatological Association, May 1, 1900 (reported in the *Journal of Cutaneous and Genito-Urinary Diseases*, August, 1900), Dr. F. J. Shepherd, of Montreal, said that to a surgeon who had to treat all kinds of malignant diseases, wherever situated, excision of the growth and the adjacent lymphatic channels and glands seemed the most scientific procedure in the majority of cases. All now believe in the local origin of cancer, and also that whenever found it should be quickly and completely removed. The disease being local, only local treatment is curative. Constitutional treatment is of no avail.

There are two forms of local treatment — removal by knife and removal by caustics. Surgeons favor the former and dermatologists the latter. The weak point in the treatment of malignant diseases of the skin by caustics is that it postpones the removal of the neighboring lymphatic tissue and glands. Dr. Shepherd held that there may be malignant disease of the glands, and yet they cannot be always told, as in the axilla and submaxillary region. Even the microscope would fail to detect the disease in the glands, the cancer cells in the very early stage being so few and far between. He instanced the magnificent results of the removal of mammary cancer by modern methods of very extensive operations. In Paget's disease of the nipple he advocates removal of the whole breast. In cancer of the lips, penis, scrotum, vulva, and whenever the skin is loose, removal by excision is advocated. Certain malignant ulcerations of the skin he admits might be successfully treated by caustics, especially rodent ulcer and those slow-growing forms of epithelioma situated in regions somewhat removed from glands, as the nose, temples, forehead, cheeks,

hands, and where the glands are not early affected. He has successfully employed free curetting and the after application of caustics in such cases. The best caustics are arsenic, chloride of zinc, and caustic potash. Some hold that arsenic has a selective action—that is, an inflammation may be produced which will destroy cancer cells, but not normal tissue. Before employing arsenic the ulceration should be curetted, or the epidermis over it should be destroyed by caustic potash. Several other methods of treatment were alluded to, such as the parenchymatous injections of alcohol, nitrate of silver, chloride of zinc, electrolysis, aniline dyes, and the injection of toxins. Coley's treatment is more suited to sarcoma than carcinoma. In sarcoma of the skin early and complete removal is the best treatment if the growth is local; when general some cases have been successfully treated by the injection of a solution of arsenic. The injection of toxins has not proved successful in Dr. Shepherd's hands.

The Etiology and Pathology of Cutaneous Cancer.

At the annual meeting of the American Dermatological Association, held May 2, 1900 (reported in the *Journal of Cutaneous and Genito-Urinary Diseases*, August, 1900), Dr. A. Ravogli, of Cincinnati, said that from the greatest antiquity the clinical conception of cancer has been an ulcer, especially of the skin and glands, with exuberant growth of granulations, which when removed has a tendency to relapse, gradually spreading, and under marantic conditions causing death. The true etiology was first given by Billroth, who considered as carcinoma only those new growths which result from epithelial production, together with an infiltration in the connective tissues. It is quite natural that the masses of epithelial cells, crowding themselves into the midst of the connective tissues, must produce an irritation which causes a proliferation of the connective tissue corpuscles. These corpuscles, which have the task of providing for the nutrition of the connective tissue fibers, are greatly developed in the embryonic state. In adult life they are much smaller, but on account of some inflammatory exudation they return to their embryonic stage, increasing in their volume; their nuclei proliferate, they increase in quantity, producing hypertrophy of the connective tissues, until they reach the form of papillary growths. In carcinoma the presence of sharp epithelial cells crowding down upon the delicate structure of the connective tissue fibers causes the connective tissue corpuscles to take part in the proliferation; hence carcinoma is a malignant production consisting of masses of epithelial cells embedded in a connective tissue structure, inflamed and infiltrated.

THE MEDICAL AGE

VOL. XVIII. DETROIT, SEPTEMBER 10, 1900. No. 17.

ORIGINAL CONTRIBUTIONS.

ULCERATION OF THE RECTUM WITH EXTERNAL PILES; COMBINED INTERNAL AND EXTERNAL PILES.*

BY JOSEPH M. MATHEWS, M.D.,

Formerly Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine, etc., Louisville, Ky.

This patient, a male, aged thirty-eight years, applies for treatment of external piles, and upon examination Dr. Green makes the statement that there is also some ulceration of the rectum. The condition is a comparatively simple one, unless there is something hidden higher up in the rectum. We can determine this by inserting the finger. I agree with Dr. Green that there is an ulceration just inside the sphincter muscle, with external piles. In other words, this man nas an irritable ulcer or fissure complicated with external hemorrhoids. What shall we do with it? Divulsion will cure the irritable ulcer, and we will cut off the external hemorrhoids.

I show you a divulser with which we will divulse the sphincter muscle; there is no stricture. I will also rub the ulceration with my finger; it is not necessary to curette it; you will see that it bleeds freely. Instead of introducing my two thumbs as described in the books, I insert my three fingers of each hand, then dilate; some of the fibers are resisting very much. The ulceration is situated just above the external hemorrhoid, and this little growth has no doubt been the means of causing the irritation and ulceration about the rectum. Fearing there may be some hemorrhage we will put a piece of gauze in the rectum, and watch the case carefully to see whether any bleeding occurs.

In explanation of this seemingly simple condition I will say: Suppose one of your clientele comes to you complaining of most intense agony whenever the bowels move, lasting two or three hours, and life is thereby made miserable. Suppose they tell you this condi-

*Clinical lecture delivered at the Kentucky School of Medicine Hospital.

tion of affairs has existed for a number of months. They generally fear they have cancer or some other serious trouble. Let me warn you, when you make an examination and find a condition like this, do not say to your patient "Why, this is a simple thing," for they suffer more pain with this condition than they would possibly with a more serious lesion. This man suffers more pain than the patient we operated upon this morning for ulcerated internal hemorrhoids. Therefore you should tell such a patient that he requires an operation, and prepare him just as you would for a more serious operation, and always produce general anesthesia.

What causes this condition? The so-called simple or irritable ulcer. It is irritable simply because it encroaches upon the sphincter muscle. It is a condition between irritable ulcer and fissure. One is an ulceration around, located on, or over, the sphincter muscle that you can distinctly see and feel, make out by the sense of touch; the other is a cracking of the mucous membrane extending down over the sphincter muscle to the anus, where the true skin joins the mucous membrane, and when you open the anus you can see only this tear. The pain, however, is just alike—the symptoms are identical, the principal one being agonizing pain, not coming on at stool, but usually about twenty minutes afterward, and lasting from two to twelve hours. I have known this pain to be so great that patients have said to me: "I would rather undergo any operation in the world than longer endure the intense agony I now suffer."

The remedy in such a case is simply a free divulsion, a rapid dilatation of the sphincter muscle, and if the ulcer is an old one, curette it, and you will nearly invariably find just outside the anus a little white central pile below the fissure. Mr. Allingham discusses in his work the question as to whether the fissure causes the external pile which we find in these cases, or whether this tag is the cause of the fissure. My own opinion is that this little tag of skin causes the ulceration, that a portion of the integument undergoes inflammatory action. Always cut off this little tag which is inflamed; it is a source of irritation. Some authors in describing the operation for piles caution about not cutting too much; my experience is that the more you cut the more good you do. These tags of skin take on inflammatory action during or after your operation, and they remain hypertrophied. How much better it is to cut them off at the time of the original operation. You will notice while I operate upon this man that I do an operation different from that described by Allingham. They say transfix the pile with an ordinary needle, and make your cut in the sulcus or white line, sometimes called Hilton's white line, which is the dividing line between the mucous membrane and the

true skin. In the first place I want you some time when you have an opportunity, either with a patient you are going to operate upon, or in your examination of others, to find and define that white line. I confess my inability to detect it; I say in my book on Diseases of the Rectum, "Hemorrhoids that do not protrude from the rectum scarcely ever require operation, except it be a capillary pile that bleeds;" therefore when they protrude from the rectum I operate upon them, transfixing the pile as I now show you. The second objection to the incision being made in the white line is hemorrhage. Allingham says he makes a cut down to the base of the pile and allows the pile to hang as an isthmus of vessels; if you cut a little further you will cut into the vessels. But in lieu of that I transfix the pile and then cut all the way around it, sufficiently embracing all the external skin that is superficial, as you will see in the case before you, so that without any extra cutting you accomplish the same results and you do not run so great a risk of hemorrhage as in doing the other operation. Which is the better operation for internal hemorrhoids—by the ligature, by the clamp and cautery, by the injection of carbolic acid, by crushing, or by many other methods that I might mention?

I have used all methods, but prefer the ligature. I prefer it first because it is so simple and easy of execution. When you see me perform this operation, you will feel at once that when you go into practice you will prefer it to any other. Another objection to the clamp and cautery is that it requires at least three assistants—one to give the chloroform, one to assist you, and one to use the thermocautery. In the country especially it is difficult to get this many assistants—good ones at any rate. I operate upon large protruding hemorrhoids with but one assistant besides the anesthetist. I operated for many years by other methods than the ligature, using other makes of forceps than the one you saw me use, and saw the many disadvantages; the forceps then in use could not be made to retain their grip and would fall off. They were not large enough. Therefore I devised the forceps which I show you. They are very much like Eastman's, which has four branches instead of three. They can be taken apart and cleansed; they can be adjusted and locked and will not fall off. The main advantage is that the forceps being long, you can catch the hemorrhoid at the base and lock the forceps, and if you have no assistant can hold the instrument in the mouth while you do your cutting and adjust your ligature. You should always carefully prepare your patient before doing an operation of this kind, because the bowels may act, and frequently do so without previous preparation, during the operation. If this should occur, you will have to

cease your operative procedures, and after peristaltic action has stopped, thoroughly irrigate the rectum, and after everything has passed continue your operation. By the use of this forceps, as I have said, you can perform the operation with only one assistant, to give the chloroform. Instead of making an incision in the white line, I make it around in the integument, then with a needle transfix the pile. But few surgeons ever transfix a pile; it was suggested by Van Buren, of New York, that instead of making this incision so deep and ligating in that manner, it would be better to transfix a large hemorrhoid and tie it on each side. Now you can see the advantage of this; the thread that you use only has half the amount of work to do; if you divide the pile and tie each side, each ligature has only half the pile to cut through; instead of taking twelve to sixteen days as when the ligature is put completely around the pile without transfixion, it will come off in half the time. Van Buren records a danger in this, as have also some others—that is, that you may puncture a blood-vessel; and it is necessary to be careful. In running your needle through in transfixing the pile, of course you cannot tell whether you are going to puncture a blood-vessel or not. To meet that objection you will notice that I tie the pile differently from the directions given in the books. By transfixion you get your thread through and then tie on each side; now take the two ends of the ligature hanging down and reverse them and tie completely around the hemorrhoid, and if you have divided a vein or incised it with the needle, by adjusting the ligature in this manner you include it, as the thread goes completely around the hemorrhoid. Since I have practiced this method I have never had any hemorrhage.

Suppose a patient has a mass of large hemorrhoids, are you to remove the whole mass at one sitting? By all means. Do not subject your patient to a second operation for hemorrhoids; I care not how large the mass, or how large the hemorrhoidal tumors, do the whole operation at one sitting. You may ask, where you remove as large a mass as this, might you not have some contraction? I have seldom witnessed any contraction. The books have much to say about stricture resulting from operations for piles, but I have not seen such results. If there is some contraction, introduce a dilator, saying nothing to the patient or others near the bedside as to what you propose to do; simply open the anus as though you were going to examine it, introduce the dilator and dilate the stricture, which is really nothing but a slight contraction, as I have stated, and you will never hear of it again. This is all that is necessary.

After you have performed the operation in this manner, how long will it be before you can pronounce the patient well? This is a pertinent question, because all patients will ask it. Whenever they

come to the hospital for treatment, one of their first questions is, "Doctor, when can I go home?" If you will do the operation as I have described, almost invariably the ligature will come away on the eighth day; this has been my observation. Sometimes it will hang to a little tissue at the end of this time, and in such cases you should simply grasp and pull it off. There will be no hemorrhage. For two or three days the patient is a little sensitive, tender, and sore about the anus or rectum. Under hot applications and the use of iodoform gauze this disappears after another week; therefore it is safe to say to your hemorrhoidal patients after operations by means of the ligature that they can return to their homes in two weeks; they generally leave me in ten days.

What is the after-treatment of piles? We dress the patient in the manner that you will see after this operation; irrigate with the bichloride of mercury solution and dress with iodoform gauze. Are you to put gauze into the rectum? It causes a great deal of pain to take gauze out of the rectum on the third day when you wish to move the bowels. You will only push gauze into the rectum when you fear hemorrhage; therefore if you have done much cutting, if your incisions have been large, if they have extended up into the rectum, it is best to insert gauze within the rectum, using a liberal amount. Then dress on the outside with iodoform gauze and the regulation T-bandage. This bandage should be applied tightly, because it will control the hemorrhage, especially that which is oozing from the tissues and veins, and sometimes small arteries. Patients will probably complain of the bandage for a few hours as being tight, but this is best, as it will save a great deal of trouble. The dressing I would allow to remain on for forty-eight hours, then remove it and put on a fresh dressing in the same manner, excepting to have the gauze out of the rectum if you have inserted it after the operation. The bowels should be allowed to move on the morning of the third or fourth day. The patient should not be allowed to take any nourishment except liquids, soup, milk, etc., soft-boiled eggs, perhaps, tea, coffee, etc., until his bowels are moved. Previous to the operation the bowels should be thoroughly moved by a dose of salts. One ounce of salts will move the bowels properly as a rule; the day before the operation this dose should be given in the morning on an empty stomach. The day of the operation you should wash out the rectum thoroughly before the patient comes into the operating-room.

The second case is a most interesting one, because you will frequently be called upon to perform this operation. You will notice the patient is very thin; he has lost a great deal of blood. His appearance seems to indicate a cachexia, but it is not. The history of this case shows that the man has large protruding piles, that for

many months he has lost vast amounts of blood; he is thoroughly anemic, but for the past few weeks he has not lost much blood. At any time he might have an attack and lose a pint or a quart of blood. His life might be in danger by reason of such an occurrence. He complains now of intense pain and some discharge of mucus at stool. Hemorrhoidal tumors as a rule do not cause much pain; therefore if pain is a factor in the case, there is some complication. The piles may become ulcerated by the passage of hard fecal evacuations. You might have as a complication an internal fissure or something of that kind, therefore you should always look for it. Do not let anything escape you in doing a surgical operation of this nature. If a man has a fissure, if he has an ulcerated rectum, if he has hemorrhoids, if he has a rectal polyp, operate upon every one of them during the same sitting. It does not complicate the cure in the least, nor the operation.

You will notice in this case there is a combined condition; here is a superfluous amount of skin, which must be removed, else it will become inflamed and enlarged to the size of a small walnut and constitute a complication.

Observe how sensitive this man is; when I introduce my finger into the rectum he flinches, so much so that I cannot possibly dilate it under the circumstances. It is my opinion that the danger in operating under either chloroform or ether is when your patient is not thoroughly under the influence of the anesthetic; when the anesthetic is taken badly, as in this case, you will be inclined to be in a hurry and wish the operation was over. Always wait until the patient is thoroughly under the effect of the anesthetic before you begin a surgical operation. The danger is not in operating under profound anesthesia, but under partial anesthesia.

One point I wish to mention again—that you can detect every disease incident to the rectum by the finger except one, and that one the majority of doctors believe they can detect, viz., internal hemorrhoids. You cannot detect them with the finger; the only way to determine the point is to dilate or see them protruded. We will try not to let this man suffer much loss of blood, because he is very anemic, and will do the operation as quickly as possible. Frequently patients will come to you complaining of hemorrhoids because they have an itching around the anus. They have gotten the impression from the family almanac that because they have an itching around the rectum they have piles. Itching piles is a misnomer; piles do not itch. Whenever there is any itching it is in the true skin; it is pruritus ani and not piles. Do not make the mistake of operating for hemorrhoids in such a case.

This man takes chloroform badly; the anesthetic is something that

you cannot well rush; you must take your time. The question will be asked you frequently by patients, "Is there any danger in piles? I have piles; is it not possible for me to go on through life without incurring any danger?" What will your answer be? I have seen persons lose a gallon of blood at one sitting from piles. What kind of piles? Not the kind before us, but from the smallest, internal, capillary (so-called) piles. This is a dangerous variety, because numerous little arteries may be involved and bleeding may be enormous. Large internal piles are veritable tumors, therefore because of the deposit of lymph that is thrown out, in this structure they cannot bleed. For this reason a man will say to you, "Doctor, ten years ago my hemorrhoids bled, but now for a year or two they have not bled at all, yet they are larger." You can understand that from the pathological change which has taken place. Therefore there is some danger in hemorrhoids, and the principal danger is hemorrhage. There is great inconvenience of course. Suppose the patient is a young lady —and I desire to say here that you will be called to operate upon hemorrhoids as bad as these in young girls sixteen to eighteen years of age, and they will ask you the cause. I am free to confess that I do not know. There is a protrusion of the mass at stool, a discharge of mucus that gets upon the linen, and they dislike this as much as they would pain, and many of them would rather have a hemorrhage than be in that condition.

One more question and I am through: Can hemorrhoids be cured in any other manner except by operation? That will be asked you by hundreds of people. Charlatans, and sometimes even reputable practitioners of medicine, will say they are able to cure them without an operation. There is no truth in this, and patients claimed to have been cured by other means did not have hemorrhoids. They had a little pruritus perhaps, called, as we have shown, itching piles, which was relieved by some simple application to the mucous membrane and the patient told that he had been relieved of piles. No internal hemorrhoidal tumor was ever cured without an operation, or atrophied by age. Suppose, however, that a patient comes to you and says, "Doctor, I cannot submit to an operation; I will not do that." Can you treat him without an operation? Is there no palliative treatment, then, for piles? How are you going to treat a case of piles upon which you are not allowed to operate, admitting that the patient has piles? The doctor usually prescribes some ointment and lets the patient go. That will do no good. The best agent as a preventive of internal hemorrhoids is water—cold water. Do not allow your patients to inject hot water into the rectum; it causes a distention of the veins and further protrusion of the hemorrhoids. Cold contracts; therefore if your hemorrhoidal patients will drink a mineral

water to keep the bowels open; if they will apply cold water to the mass after the bowels move; if they will inject moderately cold water into the rectum to aid every movement—it is the best preventive and palliative treatment of which I have knowledge. If you prefer to use some ointment, I would suggest one composed of

℞ Vaselin..... 1 ounce.
Muriate of cocaine..... 12 grains.
Morphine..... 6 grains.
Calomel..... 40 grains.

M. Sig.: Apply locally night and morning.

This makes about the best local application that can be made for hemorrhoids, especially where there is any pain. If itching is a symptom and accompanies the hemorrhoids, or in cases of pruritus itself, the best agent I ever found is menthol—one drachm of menthol to an ounce of vaselin. If this burns too much—it is a peculiar burning sensation, following which there is a cooling effect—if the patient complains of this mixture causing an inconvenience, use only half a drachm of menthol.

You cannot do an operation of this character unless the patient is under the full effect of the anesthetic. We are now substituting for chloroform the A. C. E. mixture, which seems to act well. I will call your attention again to what is known as the combined pile. There is a superfluous amount of skin around the anus, and above that a hemorrhoidal mass which is ulcerated. To operate for the internal hemorrhoids and do nothing with this superfluous skin would leave the man in a very painful condition. Therefore we will remove it, and it is your duty in doing these operations to do the same.

The question arises with some authorities, Do women have hemorrhoids oftener than men? When you remember that pressure of the uterus during pregnancy is a frequent cause, we would naturally suppose that they would. If you will eliminate the uterus as a causative factor, men have piles oftener than women. As to the causes of piles: Childbirth, carrying of the child *in utero*, by pressure interferes with the blood circulation of the rectum, and therefore causes piles. Some men drink alcohol to excess, which has its effect upon the liver, and this interferes with the portal circulation. Thus men have, as Allingham says, large venous piles, and I think this feature (alcohol) offsets the cause in women, viz., the uterus. You will not find much difference of opinion as far as these two causes are concerned in the two sexes.

We will introduce a dilator and dilate the rectum freely, which will cure the ulceration; we will pull down the hemorrhoidal mass with the forceps. You will see one large hemorrhoid presenting. Instead of cutting in the supposed white line, I make my incision around the

pile, going through the true skin around toward the base; then I take a needle with a ligature and pass it entirely through the hemorrhoid near its base, detach my needle by cutting the ligature, then tie each side separately. Be sure to get the right thread. We tie on one side as tightly as we can, then tie the other side in the same manner; then I take the ligature and pass it completely around the pile so as to catch any vein through which the needle may have passed in making the transfixion. There is now no danger of bleeding from that source. On the opposite side of the rectum you will notice a large combined pile. I catch the internal portion with forceps, and cut around it, also around the external part. I use scissors instead of the knife, as we find they work much better. We now transfix with the needle and ligate in same manner as before. Always have your ligature sufficiently long to be handled properly. Do not attempt this operation with a short ligature. Although this patient has taken a vast amount of chloroform and ether, we see there is still some reflex action, and we may say the reflexes about the rectum are stronger than in any other portion of the body. We will now open the rectum and see if there are any more hemorrhoidal tumors. We find another below; there is one large pile on the perineal portion, and we do not go through the true skin here, because if the ligature engages the true skin it is very painful. We are laboring under serious disadvantages, as the man resists, although he has been given an enormous amount of chloroform. We now have the hemorrhoidal mass entirely ligated and will snip it off with scissors. Do not go too close to the ligature; if you do you may have a vast amount of bleeding.

In a short time this man will have a perfectly smooth anus and rectum, and be entirely free from his hemorrhoidal condition. We will cut off the ligatures, but leave them long enough to hang out of the rectum about an inch. All surplus skin has been cut away. Dressings will be applied in the manner already described.

GASTRIC DISORDERS PRODUCING CONSTIPATION AND DIARRHEA.

BY JOHN P. SAWYER, M.D., CLEVELAND, OHIO.

The experience of physicians in active practice includes numberless examples of disturbances of digestion, the explanation of which depends upon a recognition of the intimate relationship existing in anatomic structure and physiologic function between stomach and intestine, into which relationship pathologic conditions enter to the fullest degree. The relationship is surely a reciprocal one, and in a given case the disturbance of either stomach or intestine may be due

to the preceding disturbance of the intestine or the stomach respectively in that case. I wish to leave to one side the discussion of the influence of a disturbed intestine upon a stomach in itself not the prime seat of disorder, and draw attention for a few minutes to conditions in which intestinal function suffers derangement with no other exciting cause discoverable than disordered digestion in the stomach, the recognition of which gives a reasonable indication for treatment.

In a large number of cases I have found in the investigation of the stomach contents the key to the successful handling of an obstinate constipation or diarrhea, as described by Oppler in Breslau, and in our own country by Einhorn in New York. The subject as handled by these men finds recognition in the latest special textbooks, but by no means in the degree which its practical importance seems to me to warrant. Because of the considerable number of cases which I have found, I have chosen to bring this subject before the profession.

Let us take up first the consideration of those cases of chronic diarrhea which are due to this condition. I shall briefly relate a typical history.

Mr. K——, aged 62, referred to me because of a chronic diarrhea which had lasted from early in September to February 9, when I first saw him. Without apparent cause the movements of the bowel began to be frequent, watery or pasty, with particles of food unchanged by digestion, of very offensive odor, usually two or three stools each morning—the first immediately on rising, without pain. There was marked anemia; the chest organs were normal; the abdominal organs were normal as regards liver, spleen, and kidney; the position of the stomach was normal, but a slight atony seemed probable, inasmuch as succussion was easily produced. A succussion sound was easily obtained over the large bowel also. The arteries were slightly irregular; there were no edemas; the urine contained neither sugar, albumin, bile pigment, nor indican. The test breakfast showed a complete achlorhydria, and a total acidity of only four. The patient was directed to avoid all meats, and to get his nitrogenous foodstuffs from milk and egg, and their various preparations in blanc manges, custards, omelets, and creams. Gelatin foods were also allowed. Starchy vegetables were directed, such as corn and wheat in ground form, rice, noodles, macaroni; and the patient was directed to avoid vegetables containing tough fibers, such as cabbage, cauliflower, spinach, beets, turnips, parsnips, celery, lettuce, radishes, etc. Rest after meals was directed. Four days later, February 13, the patient reported that his bowels moved in a completely normal manner. He slept better, felt stronger, and had gained two pounds. March 17 the

patient reported himself heavier than in twenty years (150 pounds). The bowels had moved naturally since his last report. His appetite was keen, and he had taken no medicine whatsoever.

This case is an example of a type which is continually recurring, and which is important in practice, because it is especially stubborn in resisting the ordinary measures—astringents and the so-called bowel antiseptics. These cases are usually controlled by drugs only when opium is given, but while this brings symptomatic relief, its continued administration increases the difficulty.

The rational handling of these cases is only possible when, other causes for the diarrhea not being found, investigation shows a failure of the function of the stomach, although there be no complaint whatsoever from the stomach itself. This is particularly true in those cases in which motor insufficiency of the stomach has not supervened to bring its quota of discomfort to the patient in the colicky pains, sense of load, and distress after meals. Many of these patients have badly decayed teeth, and have failed to provide themselves with artificial substitutes. Many have accordingly passed through a chronic gastritis to atrophy of the mucosa.

But the diarrhea may result from the excessive acidity of the stomach contents as well as from the commonly found condition which I have described. In a considerable number of cases which are not as constant in their manifestations of typical symptoms as in the group just described, the discharge from the stomach into the bowel of excessively acid material produces a catarrhal process, a true enteritis, whose phenomena are somewhat as follows: An hour or two after eating there will be, without sense of load or distress in stomach, an uneasy discomfort in the bowel, with colicky pains, shortly followed by two or three profuse watery movements, in which there may be recognized portions of vegetable foods as taken. The movements are usually painful, and occasionally, when frequent and long continued, will contain considerable mucus streaked with blood. Weakness, loss of flesh, and loss of appetite supervene. Investigation of these cases, which usually come after the difficulty has lasted one, two, or more weeks, will show in many subjects entirely negative physical findings until the examination of stomach contents shows an extreme hyperacidity, in which the hydrochloric acid will ordinarily rise as high as from one to two per cent, and the total acidity reaches 100 to 140. These cases are apt to be complicated with an acute catarrhal icterus. The adjustment of diet by exclusion of vegetable foods in any large proportion, and the administration of alkalies in suitable dosage, with the careful use of lavage if there be motor insufficiency of the stomach, suffice usually to promptly check

the diarrhea, and bring about a better nutrition, and to hasten considerably the course of the catarrhal icterus should it be present.

A more common case, however, is that constipation results from the existence of hyperchlorhydria. Why an excess of hydrochloric acid produces results as diverse as diarrhea and constipation is not yet clear, but the clinical observation is too positive to be put to one side. I have examined many cases, of which the following are types:

In a paper read before the Cuyahoga County Medical Society, I reported three cases of young men just returned from camps in the South, with the diarrhea which was there prevalent, with loss of flesh ranging from twenty to forty-five pounds, and in enfeebled muscular condition. In all of them the test breakfast showed a total acidity of stomach contents from 112 to 124, and the hydrochloric acid was markedly increased, reaching 1.1 per cent to 1.7 per cent. There had been no vomiting or pain in the stomach, but the symptoms were those of diarrhea and the ordinary discomforts associated with such a condition. A prompt betterment followed the free use of an alkali, and the regulation of diet to the existing hyperacidity. There was no motor insufficiency in any of these cases. One of them developed the catarrhal icterus above referred to.

On the other hand, I would relate the case of a young man twenty-seven years of age, otherwise in good health, who came complaining of constipation, with headache, slight loss of appetite, and a loss of weight of twelve pounds within four years. There was some slight tenderness in the right ileocæcal region, and a slight degree of gastroptosis. There was some slight atony of the stomach, as shown by the easy production of succussion three hours after a meal. Test breakfast showed a hyperacidity, hydrochloric acid 1.1 per cent, total acidity 84, and moderate motor insufficiency. The constipation has been most stubborn, and the physician who referred him to me stated that he had used many combinations, but had been wholly unsuccessful in obtaining relief. A diet list excluding foodstuffs stimulating excessive gastric secretion, a prescription of sodium bicarbonate and sodium phosphate, ten grains each at a time, was given, but the latter proved to be unnecessary. Some weeks later the patient reported that he had had no constipation while he followed out the diet prescribed, which had been determined by the existence of the hyperacidity. Occasional doses of alkalies had been necessary, but no other means had been taken to secure regular natural movements, and the patient reports he is in excellent condition in this respect.

The limits of this paper do not permit the detailed discussion of the diet list, choice of various articles, the foods and their methods of preparation, or the frequency with which they should be taken. It

is not possible to enter into the discussion of other forms of constipation and diarrhea, but I cannot too strongly urge upon the profession the advantage of recognizing in the conditions described the possible causal importance of departure from normal secretory and motor function of the stomach. In a very considerable number of cases drugs will be wholly unnecessary, or at least of minor importance, if the diet is adjusted in accordance with the findings in the case as to the secretion of the stomach. In this way only do we effectively recognize the fact that a large part of the stomach's work is the preparation of foodstuff for the more active intestinal process. And in this course is a ready and successful treatment for some of our most trying and, under other methods, disappointing cases.

CARBUNCLE, WITH REPORT OF A CASE.*

BY GEORGE W. GRIFFITHS, M.D., LOUISVILLE, KENTUCKY.

I have selected for the subject of this paper "carbuncle," formerly denominated "anthrax," the latter term being rarely used now, I believe, except to designate the malignant form, or what is known as malignant pustule. It is not my purpose to call attention to, or ask consideration of, the latter.

Carbuncle, as is well known, appears most frequently upon the back of the neck, next upon the shoulders and buttocks, in the order given. It develops very seldom upon the scalp, and as a rule but one carbuncle appears upon the body at a time. It is more common in men than women; it attacks all ranks and ages above twenty years; it is associated with the plethoric and debilitated, and with diabetes mellitus; it is at first superficial, but quickly penetrates the deeper structures.

The prognosis depends (1) upon the patient's general condition, (2) his ability to resist the invasion of the septic poison, (3) his age, habits of life, and environments, (4) the seat and extent of the infection, and if located upon the neck, the extent of the encroachment upon the scalp.

The dangers to be apprehended are from exhaustion, phlebitis, pyemia, and the effects of extensive involvement of the scalp in patients over the age of fifty years.

After many years of active practice, I still look with dread upon the conduct or responsibility in the treatment of patients suffering from this affliction. The majority of such patients have depressed or run-down systems, demanding treatment looking to immediate

* Read before the Louisville Clinical Society.

improvement of the general health. Here, then, we have a condition most discouraging at the very outset—a poor foundation indeed to build upon.

In the case reported the area covered by the carbuncle was very extensive, being from ear to ear and from below the collar line running upward and invading the scalp to an alarming extent. The condition was very grave, it being one of the most unpromising and stubborn cases I ever encountered.

The history is about as follows:

Mr. J. G——, aged fifty-nine years; resident of this city; he lives in a healthy locality; married; has two sons, both of whom are healthy; he is a sober, prudent man; weight one hundred and fifteen pounds; occupation that of a printer. He is not very robust, but has always enjoyed good health excepting slight nasal catarrh. He has been employed for over thirty years on one of our daily papers, working from one o'clock in the afternoon until two or three o'clock in the morning, and during all that time rarely if ever taking a day off for rest or relaxation.

I was called to see him first August 7, 1899, and attended him from that time until the following December. When I was first called to see him he had been under the treatment of another physician for about a week; previous to that time, by the skilled advice (?) of a neighbor, he had used emollient poultices. Consultation of this neighbor-talent was called, and when cow manure was suggested, fly-time being at its height, added to the extremely hot weather, I presume caused the patient to draw the line on this plan of treatment and send for a physician, which was not done any too soon, as the condition of his neck and his debilitated state were fast showing the fearful ravages of the disease.

When I assumed control of the case I found the neck in a terrible condition; destruction of the parts was going on slowly but surely. The whole of the back of the neck was involved, as already described, covered by an adherent tough mass of necrotic tissue. His pulse was rapid and feeble; hectic flushes alternated first upon one and then the other cheek; he had a miserable cough; his appetite was *nil*, and he was fully fifty pounds under his normal weight.

I adopted as a line of treatment concentrated nourishment consisting of beef tea with cream and eggs, peptonized beef preparations, etc., but relied principally upon the old and substantial tonic of iron—tinct. chlor.—and quinine. I gave occasional doses of digitalis and strychnine.

I commenced treatment by washing the neck thoroughly, then rendering the parts as aseptic as possible by the use of bichloride

solution and carbolic acid, first making several openings in the diseased tissues to permit better absorption of the antiseptics. I trimmed away as much as possible of the necrotic mass each day with scissors, then baked or cooked what was left with pure carbolic acid.

As a dressing I covered the diseased structures with powdered boracic acid, then a layer of medicated gauze and absorbent cotton, and a roller bandage around the forehead and neck, which retained all the dressings snugly in place. I changed these dressings but once daily until I had gotten rid of all the dead structures, then dressed the parts twice daily with medicated gauze and carbolized vaselin and wintergreen. I clipped away the excessive granulations and applied pure carbolic acid.

I attach but little importance to the danger of infection by curetting in these cases; I found it necessary to use the curette frequently. I used all the well known aseptic and antiseptic precautions before curetting.

The patient's convalescence was exceedingly slow and tedious; his strength was reduced almost to the minimum, and his cough was very persistent. He did not occupy his bed for weeks, being compelled to sit upright in a chair, as he said the slightest deviation from the vertical would give him "drawing pains" in the back of his neck. From the very beginning of the treatment I insisted upon his exercising in the open air, first on his own premises, and afterward in a carriage—indeed living in the open air every moment that he possibly could. I often pitied him when I saw him as he tottered and trembled in the attempt to walk when taking exercise.

I am deeply cognizant of the fact that I have offered but little if anything that is new; at the same time I think the illustration shows the case to be an exceedingly grave one. I thought it might be of sufficient interest to elicit a discussion which might bring out something new. I think we are too often tempted to report anomalous cases which are indeed wonders in themselves, but of little value to the busy practitioner in the field.

THE juice of the green pineapple is accredited in Java and throughout the far East generally, says an exchange, with being a blood poison of a most deadly nature. It is said to be the substance with which the Malays poison their creeses and daggers, and to be also the finger-nail poison formerly in use among aboriginal Javanese women almost universally. These women cultivated a nail on each hand to a long, sharp point, and the least scratch from one of these was certain death.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

PROFESSIONAL TACT.

The tact of the medical profession need not differ essentially from that tact which may find profitable expression in the thousand and one conditions and exigencies of every-day life, save only that it should be broadened and deepened as befits the intimate and personal relations naturally and necessarily sustained by and between physician and patient. Whenever judiciously and carefully displayed, it is like fine oil to the bearings of subtle machinery. It smooths the way for the easy and expeditious consummation of designs and purposes which might otherwise prove difficult or impossible, melts away barriers, real or imaginary, and injects the quality of magical good nature into numerous occasions which might otherwise appear to be routine visitations pure and simple. It creates and sustains a mutual interest between physician and patient, aids in the ready recollection one for the other, and the memory of it often happily supplements the satisfaction which the call itself has afforded. There is no more legitimate field for the exercise of the right sort of tact than in the practice of medicine and surgery. To the young practitioner it is an especially valuable faculty, well worth constant cultivation and practice.

Tact is always more or less a mystery to those who have it not. No one has it or applies it unknowingly, though perhaps at times almost unconsciously, for it is the ripened fruit of cultivation rather than an untrained natural endowment. It may often be the special mark of a person accustomed to give the most serious study to his calling, and to the science and art of suiting it to the requirements of those with whom he has to deal. Appreciation of this quality implies its possession, for, says Barbey d'Aurevilly, "If tact could be sold, only such as are already possessed of it would want to buy it." Tact is not altogether wasted, however, on tactless people, for it may win all the points which ready appreciation would have gained, and pass

for ordinary kindness and bonhomie. It would be absurd to caution against the abuse of tact, for true tact is never abused—it is always timely and fitting, invariably graceful and sincere. Imitation tact is a counterfeit too open to require labeling; it carries its brass in its face, and its defeat follows in its own footsteps.

Tact is an index to a well-rounded character, or to a conscious mastery of one's calling. The way in which a physician touches those with whom he comes in contact is often of supreme importance, and too often something goes amiss because the practitioner has presented an angle instead of a curve, or *vice versa*. Some people are naturally tactful. Not for them is the embarrassment which makes one flounder and hesitate in the midst of a sentence at the sudden realization that just what is being said is the very last remark that should be ventured to the person addressed. A happy intuition gives them the right word at the right moment, and they go through the world helping to keep its machinery running smoothly. But what is the outlook for those who have not this gift by right of inheritance? Is there no way by which they can acquire the adroitness which enables one to adapt his words and actions to circumstances? The prospects of such would be dismal indeed but for the numberless examples of what intelligent discipline can do in making up for personal shortcomings. The very nature of tact implies the possibilities for its individual development. The first need is to overcome the indifference and thoughtlessness which, principally, cause tactless words and actions.

In its highest and best expression, tact is a product of an active sympathy which enables one to understand those with whom he is brought into contact, and a generous, wholesome, voluntary striving to say or do the right thing at the right time and place, and in just the right manner. The objects to be sought for are satisfaction, not disappointment, for the patient, and a profitable visitation for the physician, both present and prospective. Anything that quickens the understanding or broadens the sympathy brings one nearer to its possession. Tact, being only touch, is very elusive, and is a perception of the most delicate relationships. It is a light and graceful thing, differing from the warm grasp of sympathy, and yet resulting, as does the deeper quality, from the ability to forget self and put one's self in another's place. There is a surface polish which proceeds from a familiarity with social forms, which is sometimes so good an imitation that it might almost seem to prove that tact is entirely superficial, and does not come from the heart. But the ability to do the thing which is conventionally correct is not sufficient to meet the demands of a really difficult or delicate situation, which may require that one shall be equal to throwing aside all conventionality. In

acquiring tact, it is by no means an empty phrase to say that the heart must help the head. Certain mental gifts are necessary to produce it, the most important of which is imagination. Without this quality one is unable to look at a situation from the standpoint of another, or to weigh and measure the effect of words or actions upon another's feelings. So essential a factor is imagination that it is doubtful whether a person lacking it can ever become scientifically tactful. It is this factor which, in a flash, shows one the effect which is being produced upon the minds of others as clearly as the image falls upon the lens of the camera, and thus opens the way for tact to meet the occasion. Sympathy and imagination might well be called the mainsprings of tact.

There is in addition to these what may be called the merely mechanical part, which can be acquired as the fingers of the musician can be trained by actual practice. It consists principally in the habit of giving complete attention to what is transpiring at the moment. This enables a physician, for instance, to understand and adjust himself to the individualities of his patient, and to gain the mental quickness which responds at once and appropriately. We have all realized the difference between talking with a fine conversationalist who has this habit of attention, which secures a quick comprehension and response to the thoughts of others, and attempting to make one's way against the inattention and wide remarks of a listener whose mind is constantly wandering to other and irrelevant things. The habit of concentration is essential to the acquirement of tact, which, in its highest usefulness, is protective, and is often interposed as a shield to receive and turn aside any objection or contention which might arise.

It would be unprofitable even to suggest occasions upon which tact might be used to advantage in the medical profession. No two cases are exactly the same, and each one must be judged entirely upon its own merits. Contrary to the conception held by some practitioners, the highest type of tact does not run away from but parallel to perfect truth, though it may portray that truth in bright or somber colors as may befit the individual patient or the case in hand. Tact is not "smartness," nor will it effectively cover up the tracks which "smartness" is morally sure to leave. Speaking generally, it may be said that a tactful physician will have every appearance of being sincere in and well adapted to his calling. He will show the same respect to all, whether patients or their friends, or not. He will be openly at the service of his patients, when it is proper that he should be so, and they will not fear to take up a trifle of his time and attention in a reasonable manner. He will not insist upon displaying his professional knowledge at all times, but will do so boldly when it is

meet that he should. If he is called upon to venture either word or act in his special capacity, he will do so gracefully and cautiously; and if not correct he will be quick to discover the error, and instant in rectifying it, with little or no comment. He will be supercilious to no one, either patient or visitor; he will gain friends and patients wherever either can reasonably be gained, and will leave a favorable impression of himself and his professional standing in the minds of all with whom he comes into contact.

EDITORIAL NOTES.

Medical College Endowment.

The philanthropists of our country may learn of an interesting and profitable field for their activities if they will read the recent address of Dr. W. W. Keen, the retiring president, to the American Medical Association at its last meeting. Eighty millions of dollars was contributed last year for various charitable purposes. While from this vast sum colleges, theological schools, hospitals, museums, and libraries have greatly profited, only a pittance has gone to the share of the medical schools, in spite of the work which they are doing in behalf of suffering humanity. The concluding paragraph of his address follows:

"In pleading for these endowments of medical schools, it is but a plea for a return to the profession of a tithe of what they have given. Two years ago I carefully investigated the value of the services rendered to the poor in the city of Philadelphia by the medical staff of the Jefferson Medical College Hospital alone, and I found that 129 medical men were then attached to the hospital, and their services, calculated on a very moderate basis of the ordinary fees, I valued at over $500,000. To a profession which gives so freely of that which is most difficult to give, its own life blood, surely the public for its own protection may give reasonable endowments to its medical schools. It will be returned to the community tenfold in better educated, better trained, and more successful doctors. More devoted, self-sacrificing men and women they never can have."

Paranoia and Anarchy.

That form of mental obliquity known as paranoia is a marked characteristic of the many individuals who have in recent years attempted the assassination of public personages. The gospel of anarchy seems to contain particularly suitable pabulum for the nour-

ishment of that sort of degeneracy. Their exaggerated egotism is flattered by the hope of a fancied martyrdom and the disgusting notoriety which their crimes thrust upon them. Very rarely are they impelled to such crimes by reason of a feeling of revenge or of personal antipathy. They seem generally to bear no ill-will toward the illustrious victim. Quite often these wretches are shown to have been kind husbands and fathers, and generally mild of mien and manner, but they seem to have some defect of mentality upon which, the spark of anarchy falling, they become at once the most dangerous of criminals.

This epidemic of assassination which in recent years has claimed as victims a czar, a president, a prime minister, an empress, and just now a king devoted to and popular with his thirty million subjects, can be traced directly to the door of the anarchistic propaganda which in England and America has been allowed almost unrestricted circulation. The freedom of speech which permits these fanatics to incite their weak-minded paranoiac converts to bloodshed is a mockery, and the police of our cities should be authorized to use the most stringent measures to break up the hotbeds of anarchy before the fanatics can bring to bear on these mental degenerates that psychologic suggestion which prompts them to such acts of violence.

Protecting Italian Laborers from Malaria.

The action of the Italian government in seeking to protect from malarial infection the laborers who are mowing, reaping, and plowing the Pontine marshes is certainly a commendable one. A number of ambulances have been sent out by the Red Cross Society to carry away those stricken with the fever. The houses in which the men live are to be protected from mosquitoes, and instructions have been issued the workmen how best to protect themselves. The outcome of these efforts will certainly be watched with a great deal of interest.

ITEMS AND NOTES.

TUBERCULOSIS is found to be particularly common in birds, affecting the liver in the majority of instances.

THE retirement of Professor Potain, of Paris, has been announced, he having reached the age of seventy-five.

THE Government Hospital Building at Savannah, Georgia, which cost $1,000,000, has just been sold for $17,000.

A LUPUS INSTITUTE, modeled on Finsen's Photo-therapeutic Institute in Denmark, has been founded at St. Petersburg.

THE Johns Hopkins chemical laboratory building has been completed. The building was destroyed by fire last winter.

A SOCIETY styling itself "The American Society for the Prevention of Premature Burial" has been organized in New York City.

Archives de Médecine et de Chirurgie Speciales is the name of a new monthly journal of Paris, established and edited by Dr. Suarez de Mendoza.

WILLIAM B. BERRY, M.D., speaker of the House of Assembly of the Cape of Good Hope, has been created a Knight of Great Britain and Ireland.

THE physician to the Empress of China is Dr. Hu King Eng, who graduated from the Woman's Medical College, Philadelphia, several years ago.

THE medical staff of the British army in South Africa consists of 466 army and 444 civilian surgeons, 566 female nurses, and nearly 6000 male nurses and orderlies.

THE sum of $100,000 has been offered the University of St. Andrew, Scotland, by the Marquis of Bute, for the endowment of a chair of anatomy in that university.

ACCORDING to Mr. Treves, Dr. Jameson gives the following instructions concerning the hygienic handling of South African water: "Boil it, strain it, filter it, and throw it away."

A BROOKLYN newspaper is authority for the statement that the mortality among children under five years of age is greater in that borough than in any city in the United States.

Dr. Wm. B. Atkinson, who for many years was secretary of the American Medical Association, a short time ago was thrown from his carriage and his head badly cut and his hip crushed.

A bill authorizing the construction of a one-million-dollar hospital in St. Louis has been approved by the city council. The hospital is to replace the structure destroyed by the cyclone.

The State legislature of Louisiana has added $5000 to the $20,000 appropriated one year ago to purchase the site and erect suitable buildings for the care and treatment of the lepers of that State.

Professor Bevan, of Chicago, maintains that 16.5 per cent of all dissecting-room subjects show the presence of gall-stones; and that of all over sixty years of age 25 per cent were found to have biliary calculi.

Our leper colony at Molokai contains 1100 persons—625 males and 475 females. Of the entire number 984 are Hawaiians, 62 are half-breeds, 37 are Chinese, 5 American, 4 British, 4 German, and 6 Portuguese.

The *Archivos de la Policlinica*, a medical weekly publication of Havana, has suspended publication. It was established eight years ago, and has been ably conducted by Dr. Enrique Lopez and a staff of collaborators.

In accordance with the recommendation of Dr. Keen in his presidential address, the trustees of the American Medical Association have established a fund of $500 to be expended annually for the encouragement of scientific research.

Dr. Devillers, the Paris doctor who recently insulted Dr. Pozzi, and subsequently fought a duel with him, was knocked over by a milk-cart recently while cycling, and fractured his left arm, in addition to numerous and painful contusions.

The Roentgen Society of the United States will meet in New York City December 13 and 14, 1900, at the Academy of Medicine. Papers have been promised by eminent men both at home and abroad, and a very successful scientific meeting is assured.

The Roman Catholic bishops in Italy are instructing their clergy to sweep and disinfect the floors of churches with corrosive sublimate once a week and after each crowded service. The receptacles for holy water and other articles are to be frequently cleaned with boiling water or sublimate.

THE troubles in China and the consequent falling off of the products of the interior have caused an advance of from 25 to 33⅓ per cent in the price of drugs shipped from that country, the chief articles of which are cassia barks, oil and buds, oil of aniseed, nutgalls, and Chinese vermilion.

THE American Association of Obstetricians and Gynecologists will hold its thirteenth annual meeting in the assembly-room of the Galt House, Louisville, Ky., Tuesday, Wednesday, and Thursday, September 18, 19, and 20, 1900, under the presidency of Dr. Rufus Bartlett Hall, of Cincinnati, Ohio.

THE worst famines of modern times were the famine in Ireland, in 1846–7, in which 1,000,000 people perished; the Indian famine of 1866, which claimed 1,450,000 victims; the Indian famine of 1877, in which 500,000 people perished; and the great famine in China, in 1878, in which 9,500,000 died.

MR. TREVES, in an address recently delivered at the London Hospital, said that genius was nothing else than some form of neurosis. Genius, he averred, never accomplished anything, but hard work would do all things, and if there was one profession in which geniuses were not wanted, it was that of medicine.

IN Naples during a period covered by the last twenty-six years there have been 29,723 deaths from the so-called infectious diseases (cholera, typhus, typhoid fever, diphtheria, smallpox, croup, measles, and scarlet fever), while during the same time tuberculosis alone was responsible for the death of 41,883 persons.

ONE of the most encouraging results of the first year's working of the London School of Tropical Medicine is the discovery by Dr. Low's experiments on malaria in the Roman Campagna of the probability of transmission of the filaris sanguinis hominis from the mosquito to the human being, and the causation of elephantiasis thereby.

M. PICHON, the French ambassador in Pekin, was originally a medical student, but discouraged at his want of success at the examinations, he relinquished medicine and took to journalism, for which he possessed a special talent. From journalism he passed into the political arena, where he has achieved a reputation which led to his being appointed to this important, if somewhat perilous, diplomatic post.

THE mayor of Marseilles put a premium of one cent upon each rat or mouse delivered alive or dead to the authorities. This was done on May 15, and in fifteen days only 686 premiums had been

paid. This rate of destruction is not regarded as satisfactory, and experiments are to be made with a communicable disease. The cause of the order against rats was the appearance of plague at Port Said and Smyrna.

A MONUMENT has been erected, according to an exchange, to the memory of Dr. Jean Hameau (1779–1851), an obscure physician of the Gironde, who in 1836, at much personal loss, published a study on viruses, in which he partly anticipated the discoveries of Pasteur. The statue was unveiled recently at La Teste de Buch, where Hameau practiced. Addresses were delivered by Dr. Laude, mayor of Bordeaux, Professor Lannelongue of Bordeaux, and others.

DR. LALOY mentions in *Janus* as a "pearl in the history of the exploitation of the profession" the recent decree of the French war department that physicians, apothecaries, and veterinarians who give their services gratuitously to the "gendarmerie brigades" will receive an official letter of thanks from the government after ten years, a bronze medal after fifteen years, one of silver in twenty years, and of enamel in twenty-five years, with the "academic palms."

THE exhibit of the Trans-Siberian railroad at Paris, says an exchange, is attracting much attention, as comfort and hygiene have both been studied in the trains. The walls are smooth wood or tiles; the seats are covered with real or artificial leather; there are shower baths; appliances for cooling the air; gymnastic apparatus; cigar lighters; boiled water in the coolers; and a sanitary official on each train who is a trained nurse and barber. The draperies are reduced to the minimum, and an automatic perfume is set in action as the door of the water-closet is closed.

THE *Boston Medical and Surgical Journal* is authority for the following: In view of the cases of insanity liable to occur in such a large force as is now stationed in the Philippines, Surgeon-General Sternberg has decided to station an expert in mental diseases at Manila to have charge of insane patients prior to their embarkation for this country. For this purpose he has given a contract as acting assistant surgeon to Dr. Charles H. Latimer, who has been a member of the staff of the government insane asylum at Washington (St. Elizabeth's) for the past twelve years. Dr. Latimer is a man of much experience and ability, and will undoubtedly be of great assistance in the general hospital at Manila in his special line of work. He takes with him as assistants two attendants from the government asylum for the insane, who have each had more than ten years' experience in the handling of cases of mental alienation.

NEW PUBLICATIONS.

DUANE'S MEDICAL DICTIONARY.

The third edition of this valuable dictionary brings the volume thoroughly up to date. A complete revision has enabled the author to extend the limits of its usefulness, so that it now includes references in pharmacy, dentistry, and veterinary science. Every word is given its correct pronunciation by a simple phonetic system, its derivation, and its full definition. In its definition Dr. Duane has shown himself to possess the true talent of the lexicographer. Clearness and conciseness are among his most practical qualifications. Eight colored plates have been introduced into the volume for the illustration of certain subjects of importance, not portrayed in ordinary text-books. The dictionary is a handsome volume, and will be found an invaluable adjunct to the consulting-room or the physician's desk.

A Dictionary of Medicine and the Allied Sciences. Comprising the Pronunciation, Derivation, and Full Explanation of Medical, Pharmaceutical, Dental, and Veterinary Terms, Together with Much Collateral Descriptive Matter, Numerous Tables, etc. By Alexander Duane, M.D. Third Edition, Enlarged and Thoroughly Revised. With Eight Full-page Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1900.

SAUNDERS'S MEDICAL HAND ATLASES.

This is the last number of the series known as Lehman's hand atlases. Attention has frequently been directed to the superb character of these productions. The art of illustration can go no further than in the exemplification of it in these manuals. Dr. Durck's atlas deals with special pathological anatomy. The plates are very beautiful and will bestow an edifying sense of reality on those unfamiliar with microscopical specimens. Combined, however, with the study of the microscope, this atlas will afford the student every possible aid in acquiring a knowledge of pathological anatomy. It is gratifying to know that this valuable work is to be succeeded by two more volumes dealing with general and special pathology.

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Durck, Assistant in the Pathologic Institute, etc. Authorized Translation from the German. Edited by Ludvig Hektoen, M.D. Circulatory Organs; Respiratory Organs Gastrointestinal Tract. With 62 Colored Plates. Philadelphia: W. B. Saunders, 1900.

PERSONAL HYGIENE.

Those who esteem it desirable that knowledge should grow from more to more among the laity will welcome this manual, in which is plainly set forth the best means of maintaining physical and mental vigor. It is an exposition of proper living based upon physiological principles. The subjects of eating, drinking, breathing, sleeping, and exercising are discussed in simple terms. The various sections of the book are written by different authorities, and the hygiene of the skin, the digestive apparatus, the vocal apparatus, the ear, the eye, and the nervous system, all come in for consideration. This is an admirable manual for the non-medical reader.

A Manual of Personal Hygiene. Edited by Walter L. Pyle, A.M., M.D. Illustrated. Philadelphia: W. B. Saunders & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

MEDICINE.

The Uric Acid Diathesis.

From a number of cases of his own, and from his observations of the work of others in regard to the uric acid diathesis, Svoechotoff (*Russky Archiv.*, May, 1900) has reached the following conclusions: (1) During the acute manifestations of gout, or during the later stages of the disease, when the patient is in a state of great debility, caused either by the occurrence of too frequent attacks or by great reduction in nutrition, clinical phenomena appear which unmistakably point to the vasomotor system being largely involved. Coincidentally a contraction, more or less spasmodic in character, of the smaller vessels may be observed. (2) Uric acid, varying in amount and rate with each individual, is deposited in and around the affected joints, and this not in the form of globules or calculi, as Pfeiffer specially maintains, but as needle crystals, which chiefly consist of biurate of sodium. (3) As regards the question whether the kidneys are capable of allowing albumin (in larger quantities) to filter through them during the acute stage of the disease, or while the depressing effects of the affection are well marked and far advanced, the author believes it to be the case. Moreover, he thinks this elimination of albumin by the kidneys may take place without—having regard to the pathological side of the question—any unfavorable consequences on the part of the secreting tissue of that organ. (4) Again, change in the general condition and the state of normal nutrition of the tissues, and possibly, also, alteration in the rate and amount of circulation through these structures, are the determining factors for the localization of the gouty deposits in special tissues and organs. (5) As pointed out by former writers, during an attack of gout, and particularly when the latter reaches its acme, both the quantity of urine and the amount of urea is noticeably diminished, while the rate of uric acid excreted is considerably increased; the author endeavors to confirm these observations. (6) With regard to the pathology of gout, the author is inclined to regard it as the result of a chronic autointoxication by the products of a morbidly altered metabolism; these abnormal bodies thus formed are in all probability closely allied to uric acid, and possibly contain also one of the bodies of the so-called xanthin group. (7) In conclusion, the author says that—at least in a large number of gouty patients—surgical interference becomes sooner or later inevitable, and is attended by good results.

Laveran's New Stain for Malarial Blood.

The new staining process used by Laveran is described in full in the *Comptes Rendus* of the Soc. de Biologie, June 9 (*Journal of the American Medical Association*, Aug. 11, 1900). It is extremely delicate, simple, easy, and reliable, and stains the nuclei deep violet; the reds are pink, the protoplasm of the parasites is a pale blue, the chromatin violet-red. He has been successful with preparations of dried blood several years old. Three fluids are required: No. 1 is a silver oxide methylene blue, or "Borrel blue." This is prepared in a flask of 150 cubic centimeters of distilled water. When the crystals are dissolved, the flask is filled up with a solution of soda and shaken. A black precipitate of silver oxide is deposited, which is washed to free it from traces of azotate and soda. An aqueous saturated solution of medicinal methylene blue is then poured over it and left for seven or eight days, shaking from time to time. No. 2 is an aqueous solution of eosin at one per thousand, and No. 3 a five-per-cent solution of tannin. A bit of camphor in each vial will prevent mold. The specimen of blood dried in a thin layer is fixed with absolute alcohol for about twenty minutes. The stain is mixed just before using, in the proportion of four cubic centimeters of the solution of eosin, six cubic centimeters of distilled water, and one cubic centimeter of "Borrel blue." The fluids are filtered separately as they are poured into the graduated test-tube, stirred, and then transferred to a porcelain crucible. The slip holding the blood is placed on top of the fluid, so that the blood rests in the fluid as the slip floats. Five to ten minutes is sufficient to stain the chromatin of most hematozoa, especially that of malaria, but several hours is necessary for the endoglobular parasite of birds. When the stain is deep enough the preparation is rinsed and treated with the solution of tannin for a minute, then rinsed again and dried. If the stain is too intense, wash with alcohol before mounting in balsam.

The Pathogeny of Gout.

Sir Dyce Duckworth, at the recent meeting of the Thirteenth International Congress of Medicine (*British Medical Journal*, Aug. 11, 1900), read a paper, of which the following is a summary: (1) That gout as a morbid condition depends on an inherent vice of nutrition, which is manifested by an imperfect metabolism in various organs or parts of the body, presumably in the kidneys, and probably in the liver. (2) That this trophic disorder or inadequacy leads to the formation of uric acid, probably in excess, and to the periodic retention of it in the blood (gouty uricemia). (3) That histology throws

no light upon the intimate nature of this defect, which thus relates to cellular potentiality, possibly under neurotrophic influence, and not, as far as we know, to structural alteration. (4) That this textural disability, or a tendency to it, may be primarily acquired, and also transmitted as a fault, thereby inducing from time to time uricemia with gouty manifestations in the descendants. (5) That in most instances, under the conditions which provoke it and in some cases independently of these, attacks of gout may grow up and come to a crisis. Such crises are attended by an alteration in the solubility of the uratic salt in the blood, whereby irritating crystals of biurate of sodium are produced and precipitated in various parts of the body. (6) That a paroxysm of gout, the sites of its occurrence, and its metastases, are determined by nervous influences, probably dominated from the bulbar center, and that the local attacks alight either in the joints or in textures which have been weakened or rendered vulnerable by impaired nutrition, owing to past injury or overuse. (7) That this central neurosis is an essential and transmissible feature in the pathogeny of gout, and pertains to the arthritic diathesis generally. (8) That the uricemia of gout is peculiar and unlike that which is induced by other morbid conditions, but that the occurrence of uricemia in the gouty is by itself inadequate to induce attacks of gout. (9) That uratic deposits in any part of the body may be removed in course of time, but are apt to be permanent in the least vascular tissues. (10) That uratic deposits may occur to an enormous extent in gouty persons without the occurrence of any pain or paroxysms. (11) That the clinical features of gout indicate that both hemic changes (due to inherent morbid tissue metabolism) and a neurotrophic disturbance act as pathogenic factors, and that, consequently, gout is to be regarded as a neurohumoral malady.

Gelatin Injections as a Hemostatic; Untoward Effects.

Max Freudweiler (*Centralblatt f. Innere Med.*, July 7, 1900) reports upon two cases of renal hemorrhage in which the injection of gelatin solution attempted with the purpose of reducing the loss of blood was followed by notable increase of the untoward symptoms.

The first case, a chronic parenchymatous hemorrhagic nephritis, showed considerable increase in the amount of blood voided with the urine, while the percentage of albumin rose—after three injections of each about seven ounces of a one-per-cent solution of gelatin effected every other day—from two to nine per cent. The other, a case of acute hemorrhagic postpuerperal nephritis, also became worse after the injection of about ten ounces of a two-per-cent solution of gelatin.

Freudweiler ascribes these untoward phenomena to the fact that gelatin or its dissociation-products are eliminated through the kidneys, and are liable to cause irritation, especially in previously diseased organs. Hence the advice to forego the injection of gelatin in cases of nephritis.

Bauermeister, on the other hand (*Deutsche Med. Woch.*, 1899), reports the case of a woman affected with chronic parenchymatous nephritis in which he attempted to overcome a serious menorrhagic flowing by the injection, three times a day, of fifteen cubic centimeters (about a half-ounce) of a 1-to-15 solution of gelatin. On the second day the patient began to complain of headaches, and soon succumbed to a typical uremic intoxication.

Sudden Onset of Typhoid Fever.

Widal (Soc. Méd. d. Hôp., in *Progrès Médical*, June 16, 1900) reports meeting with cases of typhoid fever which began with the suddenness of grippe or pneumonia. Complications which might have accounted for this peculiarity were deficient, and usually the disease ran its normal course. In one particular instance the onset of the fever prevented the pleuropulmonary type.

Sevestre has noted similar cases, and more frequently among children.

Hirtz refers to Guenean de Mussy's paper on the subject, published in 1876, and reports the case of a male nurse who suddenly came down with typhoid fever at night while bathing typhoid patients under his own care.

Vincent has seen the sudden onset of typhoid occur more especially among troops in Algiers. This form of the disease does not influence the prognosis.

Parmeutier reports a similar case occurring in a college student and incident upon the fatigue of a hunting trip.

Moutard-Martin, while a medical student, became himself affected with a very severe attack of sudden typhoid.

Siredey has noted that physical, as well as mental, overwork may bring about a sudden onset of typhoid fever.

On the Causes of Morphine Assuetude.

E. S. Faust (*Arch. f. Exper. Path. und Pharmakol.*, June 14, 1900) concludes from elaborate research and experimentation that repeated introduction of morphine into the system increases the power possessed by the organism of decomposing this drug, and that to this

fact alone we should ascribe acquired immunity toward morphine. He proves, moreover, to a certainty the existence of true chemical decomposition and not of a mere production of morphine derivatives, and believes that subsequent to its introduction into the system morphine undergoes at first a fermentative decomposition, the secondary products of which are later, by means of oxidation and synthesis, reduced to the ultimate products of catabolic activity.

SURGERY.

Residual Urine in Enlarged Prostate.

Residual urine in cases of enlarged prostate is due at first, according to A. G. Miller (*Scottish Medical and Surgical Journal*, August, 1900), to neglect to empty the bladder. Accumulation is due to this becoming a habit.

The writer's advice is: After passing water in the usual way the patient should wait a minute or two and then try again. Practice this as frequently as possible, till only a very small quantity can be squeezed out (one drachm); when that point has been reached, twice or thrice daily. This acts in two ways: First, the small residuum of urine that may result from a careless act of micturition is got rid of. In the second place the bladder tone is improved, and its function restored. It might be added that the habit of completely emptying the bladder is acquired. A still more important result is that the residual urine being diminished cannot possibly increase. *Obsta principiis* is a good working principle.

"I do not," says the writer, "bring this forward as a cure, or as a means of preventing residual urine from forming in every case of enlarged prostate. I merely suggest a safe and simple procedure, which has apparently checked the increase of residual urine in several cases, and which may in some others at least postpone the almost inevitable catheter."

Skin Grafting.

Reclus (*Progrès Médical*, No. 29, 1900) exhibited a boy whose hand had been burned in such a manner that the retracting scar brought the fingers and palm into exaggerated flexion. Reclus grafted into the palmar surface of the boy's hand a flap which he borrowed from the abdominal integument (after the Italian method), and which extended beyond the second phalanges. The operation proved an absolute success.

THERAPEUTICS.

The Treatment of Epilepsy.

Fleury (*Jour. de Méd.*, May 10, 1900) believes in the autotoxic nature of this neurosis, and therefore considers that diet forms one of the most important elements in the treatment of epilepsy, and should be combined with methods tending to free the gastrointestinal tract from toxic material. Fleury admits that some cases of epileptic seizure seem to be directly due to lesions, meningeal and otherwise, of the central nervous system, and such accordingly are very difficult to treat; but many others, and by far the greatest number, show no cerebral lesion other than possibly some inherent excitability, but in whom disorders of circulation, be they due to autointoxication or reflex irritation, are the cause of the seizure. These seizures may vary in very many respects, under the influence of diet, suppression of alcohol, etc. Patients so affected must have their diet carefully regulated and all the surroundings modified, and after this bromides may be administered. These latter become more efficacious when patients have been properly prepared for their exhibition.

The writer points out the extreme frequency of gastrointestinal disorders (possibly dilatation of the stomach), atony of the intestine, and constipation. Indicanuria is also a frequent feature. Such patients are put on dry toast, boiled eggs with ham, light fish such as sole or whiting, veal, chicken, beef, and mutton in small quantities for the first midday meal, and an extremely reduced quantity at night, the last meal being preferably vegetarian. Dry cakes, biscuits, one or two glasses of water, especially mineral or hot water; the latter should constitute the only beverage, alcohol being contraindicated. Euonymin, cascara, and similar drugs should be freely administered, while copious enemata should be given daily. Should there be any extreme dilatation of the stomach this organ should be washed out. Under such conditions of diet the bromides, especially the bromide of soda, will render much service. Chloral has also been found of much use. The administration of bromides should be relegated to the time of the seizures according as they are nocturnal or diurnal. In the case of daytime fits bromide should be administered before each meal. Massage, cold douching, brine baths, and mountain air are all more or less of great importance. The injection of an artificial serum, consisting of one per cent of phosphate of soda, sulphate of soda, chloride of sodium, and carbonic acid, is useful. Eight to ten grammes of this may be administered daily by hypodermic means. According to the writer some weeks of such treatment should stop any tendency to epileptic seizure.

The Treatment of Empyema.

To summarize the treatment of empyema, the following propositions, according to E. Martin (*Therapeutic Gazette*, Aug 15, 1900), seem tenable:

1. Empyema is best prevented by promptly evacuating all considerable inflammatory effusions.

2. In the diagnosis of these effusions, by means of exploratory aspiration, the skin should be punctured by a tenotome at the point where the needle is to be driven in.

3. Serous effusions are best evacuated by aspiration. If they reaccumulate after the third evacuation, they should be subject to continuous siphon drainage; the puncture being made by a small trocar and cannula, the latter being of such size that a small drainage-tube may be slipped through it.

4. Recent empyemata are best treated by continuous siphon drainage, the tube being introduced through a cannula of at least the diameter of the little finger.

5. When, because of a narrow intercostal space or because of constant blocking with fibrinous material, siphon drainage thus provided is inadequate, an inch of one of the ribs (usually seventh or eighth) should be resected, and a drainage-tube the diameter of the thumb should be used.

6. When the conditions are such that it is obviously impossible for the lung to expand under the influence of siphon drainage and respiratory exercises, Delorme's operation of stripping the pseudomembrane from the compressed lung should be attempted.

7. When Delorme's operation is impracticable, a resection of the ribs (Estlander) or of the chest wall and thickened pleura (Schede), corresponding in extent to the size of the underlying cavity, is indicated.

Venesection in Heat-stroke.

Klein (*Münch. Med. Woch.*, July 3, 1900) relates a case of heat-stroke occurring in a strong, abstemious, and notoriously healthy coal-passer on a transatlantic steamer, who had been ordered to temporary duty in the stoke-room, and who after complaining of inordinate thirst suddenly collapsed and became affected with violent general convulsions. A cool sea breeze and iced applications procured no relief, while chloroform inhalation was desisted from on account of respiratory disturbances. Convulsive movements increased to such an extent that four vigorous sailors were unable to control the patient. In less than fifteen minutes the strong, hard pulse became

alarmingly weak, while consciousness did not return and the heart was beating at a vertiginous rate. Cyanosis increased, respiration was extremely laborious, the now filiform pulse became intermittent —patient was plainly dying from acute edema of the lungs. Klein had recourse to venesection (220 grammes, a little over 7 fluidounces), which produced immediate relief; the pulse improved, respiration became normal, convulsions gradually disappeared, and patient went into a profound sleep which continued for ten hours, and from which he awoke a weak but convalescing man. He resumed work inside of a week.

In the treatment of heat-stroke chloroform inhalation was warmly recommended by Korfer in 1893. It was tried here and promptly abandoned, in view of threatening circulatory and respiratory phenomena. Binz, in 1895, also advised subcutaneous injections of bimuriate of quinine, warm baths, and injections of normal saline solution. The urgent symptoms occurring in this case, however, precluded any possible recourse to such means, and Klein considers that venesection literally saved the patient's life.

Antistreptococcic Serum in Facial Erysipelas.

Antistreptococcic serum was used by Dr. A. W. Harrison (*British Medical Journal*, June, 1900) in a very severe case of facial erysipelas, with exceedingly gratifying results. At first the patient was given quinine and the tincture of iron perchloride internally, and equal parts of ichthyol and lanolin externally. In spite of these measures the inflammation extended, and the general condition became worse. Within three days the iron had to be stopped because of intolerance. By that time delirium had supervened. Four days later the patient was so unconscious that she passed all excretions in bed. She was then receiving half an ounce of brandy every hour. Three days later, the temperature being still high and weakness more marked, with muttering delirium, digitalis and strychnine were ordered and an ice-bag was applied to the head. Nevertheless, the patient continued to sink and was practically moribund on the second day following, when she received the first injection of ten cubic centimeters (2½ fluidrachms) of the serum. Four hours later she had a short interval of consciousness, and in another four hours the temperature had materially declined and the quality of the pulse had improved. Another injection of ten cubic centimeters was given, with the result that the temperature went below 100° F. the following morning. A third injection was then given, followed by a fourth in the evening. By the next day the delirium had terminated. After this there was

one injection daily until eight in all had been given. Convalescence was rapid and uninterrupted. The doctor is very positively of the opinion that the serum saved the patient's life, which could not have lasted twenty-four hours longer without it.

Alcohol Fomentations in the Management of Peritonitis and Appendicular Colic.

Schrwald (*Rev. de Thérap.*, July 1, 1900, p. 451) has met with success in the treatment of severe peritonitis by the use of alcohol fomentations, and reports favorable results from the same application in appendicitis. Pain, vomiting, tympanism, diarrhea, soon disappear under this treatment, which may, without inconvenience, be resumed in case of relapse. He believes that aside from cases in which the surgeon's skill is urgently required, this revulsive action of alcohol may prove of considerable benefit. A. Benoit states in connection with Schrwald's suggestion that French practitioners often associate alcohol and very hot water for fomentations to be applied on the abdominal parietes, and by this means insure a remarkable sedation of the peritonitic symptoms. Professor Bonilly is said to be very partial to this plan of treatment.

Radical Cure of Epithelial Tumors by the Local Use of Arsenic.

Trunecek (*Klin. Therap. Woch.*, No. 2, 1900) advises the use of the following mixture, which the physician should apply himself once or twice a week, and which seems so much the more efficacious as the neoplasm is more ulcerated:

Powdered arsenious acid	1 gramme.
Absolute alcohol	75 grammes.
Distilled water	75 grammes.

M. S.: For external use.

After two days the diseased surface is covered with a sort of scab, which should be left *in situ* and painted once or twice a day for as long as the patient can bear the treatment. Small-sized carcinomata should be treated for from three to four weeks.

Extra-buccal Feeding.

C. A. Ewald, in a paper read before the Thirteenth International Medical Congress, Paris, August 2, 1900 (*Medical Record*, Aug. 18, 1900), says that extra-buccal feeding does not completely replace feeding by mouth, and is not permanently capable of answering the

demands of metabolism. In most cases in which this method is exclusively resorted to, a state of malnutrition sets in from the outset. An exception to this rule occurs in those cases of gastric fistula in which the operation is necessitated by benign stricture of the esophagus. For a short time, in weakened individuals whose metabolism is below normal, it may be possible through extra-buccal feeding to increase the nitrogen conversion and even to cause an accumulation of nitrogenous substance and fat. The best results are obtained when it is a question of temporary replacement of the natural feeding per os, or when natural buccal feeding is resorted to as an accessory measure to the former. Nutritive enemata are to be preferred to the subcutaneous injection of oil. The applicability of the latter lies rather in isolated cases than as a measure adapted to wide-spread use and practice.

Abortive Treatment of Typhoid Fever.

Sanchez (*Los Nuevos Remedios*, No. 7, 1900), at the Medical Congress in Rome, arguing that typhoid fever is an intoxication of internal origin, an autotyphization springing from an intestinal source, that consequently disinfection of the gastrointestinal tract constitutes the main indication, and deprecating the use of insoluble antiseptics recommended by Bouchard, advises the use of oil of turpentine ten grains mixed with castor oil thirty grammes, to be taken in the morning and on an empty stomach. Copious motions and a considerable decrease in the temperature are the welcome results of this treatment. He further prescribes a mixture of charcoal and iodoform with one grain of quinine sulphate at bedtime. This treatment, if instituted at an early stage, reduces the duration of the disease to about ten days.

Cod-liver Oil Enemata in Tuberculosis.

Zeuner (*Therapeutische Monatshefte*, June, 1900) reports excellent success from the daily use of cod-liver oil enemata. From 60 to 100 grammes of the following emulsion is injected at bedtime:

Pancreatin puriss	5	grammes.
Fel bovis inspiss	0.5	decigramme.
Sod. chlor	1.5	grammes.
Dissolve in aq. font	50	grammes.
Digest during two hours with blonde cod-liver oil	250	grammes.
Add ethereal oil eucalyptus	2	quarts.

From experimental research it appears that seventy-five per cent of the emulsion is absorbed. It is not necessary to always precede the medicament with a cleansing enema.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

The Influence of Diseases of the Nose upon Osteitis and Arthritis.

C. Ziem (*Monatsch. f. Ohrenh.*, No. 5, 1900) reports his own case, illustrating the bearing which nasopharyngeal diseases have upon osteoarthritic manifestations. Ziem was affected for five years with a catarrhal inflammation of the right antrum Highmori, when, as the result of a severe fall, he developed a case of arthritis of the right knee. The subsequent condition of the latter was so plainly correlative with that of the nasal affection that Ziem could not overlook their mutual interdependence.

He urges the necessity of careful rhinoscopic examination in order to perfect an etiologic diagnosis in all doubtful cases of serous or purulent infiltration of bones or joints, and extensively quotes most interesting cases from the practice of various authorities who wrote on the subject.

Nasopharyngeal Disease in Pediatric Practice.

Dr. Huber has written an able article with the above title for the *Jacobi Festschrift.* The article has been published in the *Archives of Pediatrics*, vol. xvii, No. 8, and is worthy of careful reading. He deals at length with the anatomy and physiology of the nasopharynx, and emphasizes the importance of free nasal respiration.

Anatomists have clearly demonstrated the direct lymphatic communication between the vessels in the nasopharyngeal mucous membrane and those at the base of the brain. Bacteriologists have reported the presence of microorganisms in the nose and throat similar to those found in many cases of meningitis. Clinical observations show that the different varieties of meningitis are most commonly observed between the ages of three and five years, at a time when nasopharyngeal troubles are very common. The intimate lymphatic connection referred to, and the identity of the microorganisms in the nasopharynx and those found in a large number of cases of meningitis, tend to explain the etiology of many heretofore obscure inflammations of the brain and meninges. He concludes his article as follows:

1. The removal of the lymphoid hypertrophies in the nasopharynx and oropharynx, with the cure of the associated nasopharyngeal catarrh, will restore the patency and permeability of the nose. If done early, many local pathological changes may be avoided.

2. The general health will be more or less improved.

3. The mental faculties and general intelligence will be improved.

4. Defects in speech and in hearing due to nasal troubles will disappear.

5. Deaf-mutism may be relieved.

6. The functions of taste and smell will be restored.

7. Reflex neuroses of various kinds will be modified or cured.

8. Nasal and supposed pulmonary hemorrhages will disappear.

9. Thoracic deformities will be relieved or cured.

10. The tendency to acute rhinitis, pharyngitis, laryngitis, bronchitis, and pneumonia becomes less and less with the restoration of normal respiration.

11. The dangers attending the presence of enlarged cervical lymph nodes will be avoided.

12. The invasion of various infectious diseases is less likely when the nasal mucous membrane is in a healthy state.

13. The danger of meningeal infection from the nasopharynx will be lessened.

14. Ear complications in general, and particularly those incidental to the infectious diseases, will be avoided or rendered less dangerous.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Calomel in Diseases of the Eye.

Heddaus advises the internal use of calomel in phlyctenular conjunctivitis and in blepharitis (*Woch. f. Ther. und Hyg. des Auges*, No. 30, 1900), and prescribes it in the ratio of one milligramme ($\frac{1}{64}$ grain) per month, and one centigramme ($\frac{1}{6}$ grain) per year, of age. Over five years the dose is increased under proper precautions to avoid untoward effects.

Blue ointment inunctions, however, are still more efficacious than calomel, and should be used daily in doses of from eight to fifteen grains rubbed into the skin of the back, or of the thighs, during ten minutes. For use in children below one year of age it may be advantageously diluted with equal parts of soap.

One should not be deterred by an initial increase of the symptoms from the use of mercurials. The sooner such a case is subjected to hydrargyric medication, the better for the patient.

Guttmann (*ib.*, No. 32, 1900) also recommends the internal use of calomel in scrofulous eye diseases, but cautions against neglecting local measures, which are ever of primordial importance.

Suture of the Lids After Cataract Operations.

Jacqueau, of Lyons, France (*La Clinique Ophthal.*, July, 1900), recommends suturing the eyelids of old, feeble-minded, and obstreperous patients after extraction of cataract, and reports a successful case in a woman eighty years of age. When operating without a general anesthetic, he advises to begin with the introduction through the eyelids of silver wire sutures, which may, after completing the extraction, be approximated by torsion of the wire. If indicated, antiseptic douching of the conjunctival sac may be instituted from the palpebral commissures.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Artificial Abortion: A Safe and Sure Method.

Oehlschlager (*Centralblatt f. Gynäk.*, July 7, 1900) reviews the accepted indications of artificial abortion, which he classes as follows: (1) Cardiac deficiency with tendency to hydropic accumulations (Olshausen); (2) advanced pulmonary tuberculosis; (3) nephritis; (4) cancer of the uterus and irreducible retroflexion; (5) pelvic deformity of such a character as would constitute an absolute indication for Cæsarian section, if this alternative is refused by the prospective mother; (6) uncontrollable vomiting of pregnancy.

Oehlschlager recommends the following mode of procedure, which he has employed for many years, and which in his hands has never given rise to any untoward complications after securing the assent of a competent colleague. A curved metallic catheter of about two millimeters diameter is passed into the uterine cavity and clear up to the fundus—which is a very important condition of success—and, by means of a closely fitting syringe, from three to four grammes of tincture of iodine is injected. The catheter is now withdrawn and an ordinary dry tampon inserted up to the cervix to avoid unnecessary cauterization of the vagina. On the third day following the injection blood begins to show, and the woman thereafter goes through the usual course of a normal menstruation. Failure to menstruate, incident upon imperfect penetration of the injection, may be remedied by repetition of the procedure and positive introduction of the catheter up to the fundus. The entire process is of such innocuous nature that Oehlschlager often performs the injection at the office, and not only allows his patients to return home immediately, but even foregoes the usual recumbent rest in bed. He takes it for granted, of course,

that the injection is made within the first few days, or possibly weeks, after menstruation has ceased.

The original feature of Oehlschlager's method resides in the use of the tincture of iodine, which he considers a most appropriate application, because (1) by virtue of its ready diffusibility it quickly destroys fetal life; (2) its remarkable antiseptic efficiency precludes the occurrence of untoward symptoms; (3) its stimulating influence promotes uterine contractibility.

Indications for Artificial Abortion in Uncontrollable Vomiting of Pregnancy.

F. Walzer (*Deutsche Med. Woch.*, July 12, 1900) relates a case of uncontrollable vomiting occurring in a pregnant woman, and in which he noted a symptom hitherto unrecorded, which he believes to constitute an indication for active interference on the part of the surgeon. He refers to Ehrlich's diazo-reaction with carmine red discoloration, the occurrence of which in typhoid fever or tuberculous patients has been considered as a sign of unfavorable prognostic import, and which has not hitherto been recorded as occurring in the incoercible vomiting of pregnancy.

Arguing by analogy Walzer removed the ovum and saw the reaction disappear from the urine within twenty-four hours, while the patient proceeded to uninterrupted recovery. Walzer is inclined to find in the occurrence of the diazo-reaction a definite indication, determining to a nicety the limitations of expectant therapeutics as against the urgency of instrumental interference.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Therapeutics of Travel and Change of Scene in Nervous and Mental Diseases.

Dr. Richard Dewey, in the *Journal of the American Medical Association* of August 18, 1900, raises the query: "In what cases is travel or change of scene likely to be beneficial, and in what cases contra-indicated?" He cites several cases:

A neurasthenic who was much worse in changed scenes, but who made a good recovery on sanitarium treatment. A second case of neurasthenia, sent abroad for cure from travel, in grief over the death of one of her family, became afflicted with painful obsessions and

intense insomnia, and steadily grew worse on prolonged rest-cure, the benefits of a watering-place, etc., but improved greatly in a private hospital, and satisfactorily completed convalescence in her own home. In a series of forty-six cases sent away for recreation, thirteen developed mental conditions calling for custodial treatment, and the remainder, neurasthenic and hysterical patients, mostly failed of the expected relief and sought other advice. He cites a case of paranoia to show the evil of sending patients away who are undergoing rapid changes.

A number of cases of paretics are cited to show the folly and often great danger of subjecting these patients to the strain and excitement incident to travel.

On the other hand, certain cases, mostly chronic conditions, have been healthily helped by judicious change of scene, and travel. Broadly stated, convalescence is the stage most likely to be beneficially influenced by travel, provided, of course, the condition is not one of prostration. Proper treatment and accessible and judicious medical advice are best combined with travel to secure its fullest benefits. Visits to friends are apt to be fraught with danger, and long journeys must be carefully considered.

Action of Gelsemium upon the Nuclei of the Motor Cerebral Nerves.

In the *New York Medical Journal* of August 18, 1900, Dr. R. H. Whitehead details his study of the action of this drug upon motor cells. To test it in acute poisoning he injected into a rabbit two months old twenty-five minims of a fluid extract, the rabbit being found dead at the end of an hour. An "initial chromatolysis" was observed, the Nissl bodies being abnormally large and indistinct, in many cases running into each other. Subacute maximal poisoning was investigated by feeding on turnip leaves to rabbits increasing doses of the same preparation, the final dose being injected. All the nuclei exhibited changes; the Nissl bodies, few in number and of large size, being situated principally around the nucleus of the cell, etc.

The hypoglossal nucleus was the most and the oculomotorius the least damaged. The author reaches the following conclusions:

1. Toxic doses of gelsemium produce chromatolysis of the cells which constitute the nuclei of the motor central nerves.

2. The alterations produced are not specific, but are quite similar to those caused by various other agencies which act injuriously upon the motor nerve cells.

THE MEDICAL AGE

VOL. XVIII. DETROIT, SEPTEMBER 25, 1900. No. 18.

ORIGINAL CONTRIBUTIONS.

CHRONIC INFLAMMATION IN STRUCTURES OF THE ELBOW FOLLOWING AN INJURY—VILLOUS DEGENERATION OF THE KNEE-JOINT.*

BY JAMES M. HOLLOWAY, A.M., M.D.,

Formerly Professor of Surgery and of Clinical Surgery in the Kentucky School of Medicine, etc., Louisville, Ky.

Case 1.—This patient, Mr. S——, aged thirty-nine years, came to us a week ago last Saturday from the country with an injury to the arm which will be remembered. He was injured while riding horseback; the horse threw his head up and struck the man's hand, extremely flexing it; but that is not the injury for which he consults us. After that a piece of scantling fell, striking him upon the elbow of the same side. It was over two years ago that he received the injury.

I found that the forearm was extended, and there was considerable swelling. From the skiagraph which has been taken you will see there appears to be an extensive thickening of the tissues, and also what looks like a sarcoma at a point near the elbow. The fact of there being redness of the skin over the point of enlargement caused me to predict that when opened we would find pus, which proved to be true. We understand also that pus was discharged when an incision was made along the border of the ulna some months before. The wound healed, and it was stated by the surgeons who performed the operation that there were two places where the periosteum had been destroyed. I could find no evidence of this at the time I operated upon him. I opened an immense abscess at the elbow-joint, then by carefully studying the case, running my finger in the opening, I

*Clinical lecture delivered at the Kentucky School of Medicine Hospital.

found it was necessary to make two counter-openings, one behind and above the ulna, the other on the inner side of the arm, and I then connected all these openings after thorough curettage with my finger, removing several large masses of cheesy matter. I connected these openings by introducing thorough drainage, composed of strips of iodoform gauze, from one opening to another, the ends being tied and the wound packed. I then made forcible flexion of the forearm until I could get it at a right angle. The wound has been dressed several times since the operation, and there has not been the slightest reaction; the man's general health is good; he suffered some pain after dressing, because we made him practice gentle motion of the elbow-joint; but for the last two days we find there has been a little fulness and redness—bogginess—behind and near the olecranon process, and to-day I propose to open and explore this to see if there is any injury to the bony structure of the lower end of the humerus or upper end of the ulna which I failed to discover at our previous operation.

We will first aspirate to see if there is any pus left. It is necessary to sterilize the needle before it is introduced, and it sounds nice to say that we have passed it several times through an alcohol flame, but I have not found this convenient at times, so I have immersed the instrument in hot water, water that has been boiled and sterilized, and have had no trouble resulting from it. The water that I am using has been boiled. There is so much clubbing and turgescence about this joint that I confidently expect we ought to do an excision; and I have not given up my fears that this may ultimately be necessary, as every time the joint is moved it gives him a great deal of pain.

Where you have such an extensive involvement of all the tissues about the joint, and there is a history of injury, you should be very guarded in expressing an opinion as to the prognosis, because in many cases you will find an involvement of the joint. I have fixed the arm in better position than it was before, hoping that repair would occur even at the expense of fixation of the joint. I have practiced a little passive motion every day or two when the wound was dressed, but every time it has given him pain.

Now it would be a very unfortunate thing if we have to do an excision here, because we have a case which was thoroughly septic at the time of our previous operation, and time and again in these tuberculous joints you will find not only a mass of tuberculous deposit, but you will also find sinuses running down into the joint. I have seen as many as sixteen sinuses, every one of them leading down into the joint, like roads lead into Rome. No matter which way you might start, the sinus would finally lead down to the joint. In this case we have

three sinuses of which we now know, and all of them probably lead to the joint. I was very much tempted to introduce my finger into the joint to see if there was any involvement there when I operated upon this man a week ago, but I did not do so, hoping it might not be necessary to open the joint.

At the present time there is pitting on pressure. Now the question is, What have we here? I find that acupuncture with a clean needle does no harm, and about joints I have oftentimes seen it do good, therefore I shall use it unhesitatingly. I could give you a long talk about the value of acupuncture or exploration of this kind, not only about joints, but also of the internal organs. I remember on one occasion I found edema between the ribs over the liver, and pitting on pressure everywhere within a space of two and a half inches. In that case I punctured the liver with the aspirator needle in eleven different places, fully expecting each time I would get pus from an abscess sac in the liver. That man had been suffering severe pain in that region for four months, and had almost acquired the morphine habit. In less than a week he was going about, morphine was discontinued, and he is well to-day.

In another case a man fell and injured his shoulder-joint to such an extent that the late Dr. Clements and myself in our exploration found a marked erosion of the bone, as it seemed to us from the sense of touch and manipulation by the aspirator needle, and told the man we thought from our examination that it would be necessary for him to have the upper end of his humerus removed. He declined the operation, and came back to us in three weeks and turned a somersault in my room, using his injured arm freely. He stated that the treatment we had given him, which was simply acupuncture as a means of exploration, had resulted in a perfect cure.

I mention these cases to show that I would not hesitate at any time to use the aspirator needle as an exploratory measure. It will often result in benefit when least expected.

I am now introducing my finger into this wound to see if I can determine just what the trouble is. I find there is thorough drainage except between two of the openings; a band of tissue which separates these is being broken down under my finger. I will manipulate carefully, as I am in close proximity to several blood-vessels. I find that the ulna seems to be twice or three times as large as it should be and I believe it is diseased; the edema seems to be confined almost entirely to that region. I believe the ulna has sustained some damage; as it is well covered, however, I am disposed to be hopeful about it. If we could deal with it from within, we could easily get rid of the trouble.

The joint has not been opened, and we will now dress the wound just as we did before, having introduced fresh gauze drains, and give the patient the benefit of a week or ten days longer and see what develops. Bear in mind that I have impressed you with the fact that there is a localized edema over the ulna, along the old cicatrix, where a wound was made before the patient came to the infirmary.

We will have this man before the class again in the near future in order to show you the progress of the case.*

Case 2. — This gentleman, Mr. McK——, aged thirty-five years, consulted me several years ago about a trouble with his knee which I called then, and still call, villous degeneration of the knee-joint, a degeneration of the synovial sac with a thickening of its fluid—now well understood as a form of tuberculosis. At the time he consulted me I put the limb in an immobile position and tried by the aid of a well-adjusted saddle-skirting leather splint to bring about a cure. For twelve years this man has worked as a fireman on an engine and has done all kinds of work with his leg straight, not having any use of his knee; he has worn a splint some of the time, but usually it has been left off; he is constantly in a mental state of anxiety for fear he will trip his toe and thus injure the knee. He is almost always walking about, and of course is in more or less danger of doing an injury to his leg. Twelve years of fixation of the limb in a straight position has not produced a true ankylosis; there is a false ankylosis by union of the bones by the organized lymph, modifying the shape, elasticity, and mobility of the capsular ligament and the crucial ligaments; there is atrophy of all the muscles of the thigh from non-use, but there has been sufficient action of these muscles to prevent fatty degeneration. You will observe the difference in size and shape of the two limbs; measurement would show a marked difference, certainly three or four inches, in the circumference of the two thighs. On one side we have a beautiful development of the leg, while the other is wasted, soft, and flabby. I said before I saw Mr. McK—— that I had seen these cases get well; although Senn and others of the German school now insist that every one of these cases called villous degeneration is tubercular in origin, I do not believe it. I want to say to this patient now that I think it is due myself that he should permit me to give him chloroform

*This patient developed an erysipelatous inflammation and was removed to the eruptive hospital, on account of the liability of infection of other cases in the wards. From the eruptive hospital he was sent to his home in Indiana. There were no other cases of erysipelas, nor had there been any up to this time, in the Kentucky School of Medicine Hospital. No others developed after this man left the ward, nor had I attended a case of erysipelas in other practice. Later reports from the man show that his arm is in good condition; the wound has entirely healed, and he has some motion in the joint.

to see how much motion, if any, I can reestablish by stretching these ligaments and breaking up the adhesions. I will do it within the limits of safety, because I have the case well in hand. I believe that a few manipulations under chloroform will so far restore him that he will be able to take up any occupation instead of having to select a business suited to his physical disability. In his present condition a physical examination would exclude him from most positions that are desirable. He would now have been an engineer on the railroad had it not been for his physical infirmity. His condition is such that we should administer chloroform and try to break up the adhesions and restore motion as far as possible; I would exercise little force, and I would rather accomplish the desired result in three or four séances than one. After breaking up the adhesions we would put the leg in a light plaster dressing, and he would be allowed to go about. After a few days I would treat it as I would treat a fracture of the knee or elbow-joint followed by hyperplasia, and the treatment would incur little danger. First break up the adhesions, then secure immobilization, and afterward practice massage.

TWO COMMON PATHOLOGICAL CONDITIONS—(1) FOREIGN BODIES IN THE EYE; (2) INFLAMMATION OF THE MIDDLE EAR.*

BY LOUIS W. FLANDERS, M.D., DOVER, N. H.

In preparing a paper for an occasion like this, there is a great temptation to report some unique and obscure case that has long puzzled us, and which we have at last brought to a successful termination. Such reports are extremely interesting without doubt, but I do not think they possess the practical value that is to be derived from the discussion of more commonplace subjects. In choosing the subject of this essay, I was influenced by an earnest desire to bring something before you that would be of value to you as general practitioners, and I ask you to be patient with me if, in discussing the two conditions under consideration, I enter into details that may seem trivial; for success in the treatment of the eye and ear depends in a great measure upon careful attention to small things.

1. *Foreign Bodies in the Eye.*—When a man gets something in his eye, he usually either tries to dust it out by flapping at it with a silk handkerchief, or searches in the depths of his vest pocket for his "eye-stone," and having found it, gravely puts it in vinegar until it "crawls," and then transfers it to his eye as a "chaser." When the

* Read before the New Hampshire Medical Society.

stone has thoroughly ploughed up the bulbar conjunctiva, and the eye still feels uncomfortable, he goes to his family physician, who first locates the foreign body upon the cornea and then proceeds to—scrape. Now if I do my duty in this matter, I shall be obliged to criticize a little, but I wish you to remember that I do not do it maliciously, but in all kindness. Remember that I am speaking of practice as I have seen it, and if you do not practice that way, then you surely cannot be offended at my criticism. To those who do practice that way, then, I would say, "Don't scrape." I am sure that if a patient came to you with a sliver in his hand, you would not begin at the skin and scrape down to the sliver; you would draw it out the way it went in, if possible, or make an incision and lift it from its bed. Why not do the same with a foreign body buried in the cornea? I have no doubt that some of you have dug at a piece of steel or emery in the eye long after it was apparently uncovered, and wondered why it did not come out. It was because you were applying your force in the same direction that the body entered the eye. Reverse the direction of your traction, and it comes out immediately.

How shall we determine the presence of a foreign body in the eye, and the direction of the path of penetration? Place the patient before a window, and let him roll the eye slowly from side to side. Watch the shining reflection of the window-pane upon the cornea; if there is a break in the continuity you will see it. Failing in this method, take the patient in a dark room, and with a lens of about two inches focal distance condense the light from a lamp upon the cornea. No matter how minute the speck, it cannot escape you then. If you are satisfied that the foreign body is not on the bulb, turn the lids and search carefully along the conjunctival folds. In nine times out of ten, however, you will find the source of irritation on the cornea. Instil a few drops of a four-per-cent solution of cocaine into the eye and wait until the cornea is thoroughly anesthetized.

Now for the selection of instruments. A speculum is not necessary. It is uncomfortable for the patient and gives him the impression that a serious operation is about to be performed. Steady the eyeball with the first and second fingers of the left hand. Various scoops and spuds have been devised for these cases, but you do not need them; they are often worse than useless. Any fine-pointed knife will do. The tenotomy knife usually found in pocket-cases is a first-rate instrument for this work. Don't forget to sterilize it; it is a short process and may save your patient a corneal ulcer. Seat your subject before a window and direct him to roll the eye slowly about. When the body is fairly in view, ask the patient to fix his eyes steadily upon some object in the direction in which he is looking. If the

foreign substance is a small seed, a grain of sawdust, or a bit of coal, insert the point of the knife under it and carefully lift it off from the epithelium. If it is a particle of emery or steel embedded in the corneal layers, remember that its direction is probably upward, and make your traction downward. You may have to lay open the path of the projectile with a touch of the knife. If a splinter of steel has penetrated the cornea, you will surely push it into the anterior chamber if you work at it from the outside without supporting it from behind. Such cases require counter-pressure from the outside, obtained by passing a cataract knife into the anterior chamber, flat side toward the foreign body.

And now we come to gunpowder. Every Fourth of July some enthusiastic but impatient youngster inspects the priming of his cannon at the moment it ignites. His face and eyes are burned and filled with grains of powder. Very often the superficial layer of the cornea will be burned and whitened so that it will peel off like a film. But this need cause no apprehension, as it is usually renewed in a few hours with no resulting damage to the sight. Rarely, however, does an eye escape without a few grains of powder being deeply embedded in the cornea. In the face you may take a nail-brush, and by vigorous scrubbing get it out very well, but in the eye every grain must be carefully picked out. It is a tiresome piece of work. Each individual grain is usually buried half-way through the cornea, and the moment you touch it with a spud it crumbles. Here I think we shall be forgiven if we scrape a very little. A small scoop about a millimeter wide is the best thing to use in these cases. With this instrument we sink a well as it were down to the grain of powder and scrape it out from the bottom, rubbing the upper lid down over the eyeball occasionally in order that the tears may wash out the blackened particles from the wound. If the traumatism has been severe, or the operation for the dislodgment of a foreign body prolonged, it is always wise to instil a drop of atropine into the eye before sending the patient away.

2. *Inflammation of the Middle Ear.*—Upon receipt of the programme for the day I found that another member of this society had chosen "Diseases of the Middle Ear" for the subject of his paper. I shall, therefore, confine myself to the consideration of acute otitis media.

I think that I am correct in saying that this condition is seen more often by the general practitioner than by the specialist. The family doctor gets the "earache," and the specialist gets the chronic purulent otitis that refuses to be cured. In the beginning I want to plead for a little more attention on the part of the general practitioner

to the methods of examination of the ear. I am afraid that there is now and then a doctor who doesn't know whether he has the tympanum or the posterior wall of the auditory canal at the end of his speculum. A patient once came to me who said that his physician told him that his ear-drum was eaten away and the little bones in his ear all rotten. An investigation showed that the doctor had been looking at the blackened end of a plug of inspissated cerumen, and it took some of the most ingenious lying that I ever did in my life to get out of that case without throwing discredit on my brother practitioner. The patient was astounded at the amount of "rotten bone" that came out of his head.

Too often the entire treatment of diseases of the ear on the part of many practitioners consists of two measures, namely, instilling sweet oil into the ear, and packing the auditory canal full of powdered boracic acid. Oil is of no value whatever in the ear, and simply obscures the drum when we come to inspect it. Packing the ear with powders is often pernicious, as they will form hard crusts in combination with the pus and serve as an impenetrable barrier, damming back the discharge and forcing it into the mastoid cells. Let every doctor make himself perfectly familiar with the anatomy and physical aspect of the auditory canal and the membrana tympani; and another point I would insist upon is asepsis in all treatment of ear affections. It is too often neglected, and yet I know of no department in medicine where it is more necessary. Ear specula are especially liable to be contaminated, and I keep mine in a solution of formaldehyde all the time; they are hard rubber and consequently cannot corrode.

There are two varieties of acute inflammation of the middle ear, namely, acute catarrhal otitis media and acute purulent otitis media. I am inclined to think that many of such inflammations start as the catarrhal variety and become purulent only after perforation of the drum, which establishes a road for infection from the outside. The physician should always bear in mind the extreme liability of children to this disease, and be on the watch for it in patients too young to express themselves in words. I have seen more than one case treated for meningitis until the advent of a discharge from the ears established the diagnosis.

If we are called early to a patient with the earache, we should always try to abort it if possible. The administration of a saline cathartic, rest in bed, a dose of morphine or paregoric, and a hot-water bag to the affected side, will often cut the trouble short. If, after a few hours, the pain continues and inspection of the drum shows the membrana flaccida red, with engorgement of the vessels along the manubrium, the question of bloodletting comes in. It is a mooted

question as to whether leeches do any good at this stage of the inflammation or not. I should confine their use to healthy adults. The proper place to apply them is at the tragus; put on at least two, and encourage the after-bleeding for a half-hour or so. If, in spite of our efforts, the pain goes on and the tympanum begins to fill with a serous fluid, we must adopt more radical measures for relief. An inspection of the drum shows the bony landmarks nearly obliterated and the membrane bulging outward. Shall we leave that pent-up serum or pus to find its own way out? Certainly not. I am sure if any of you had a patient with an abscess in any other part of the body, you would advise incision as soon as fluctuation could be felt. If this same rational treatment were carried out in aural abscesses, we should not see one-half the mastoid complications we do now. The popular idea that the membrana tympani is holy ground should not be allowed to influence us. We see patients who hear just as well with a hole in this membrane, and I believe its principal function is to keep bugs and sand out of the mechanism of the middle ear. If we incise it, it heals in twenty-four or thirty-six hours, and the organ is as serviceable as before, while the benefit conferred on the patient is often instantaneous and permanent.

With a moderate familiarity with the use of the aural speculum, the operation is not difficult. In the majority of cases the bulging is in the posterior quadrant, and if you will think a moment, you will remember that the chain of little bones is high up in the roof of the tympanum, and consequently out of the way of an incision in the lower quadrant of the drum. With a very thin, sharp knife, the operation is not unbearable for the adult, unless we have a purulent case and an extensive incision before us. In young children I can see no harm in a few whiffs of chloroform prior to the operation. As for the instrument, the myringotome, especially prepared for this work, is best, as it has a small steel shank that does not fill up the speculum so as to obscure the field of operation.

Prepare the ear by thoroughly syringing with a warm 1-to-8000 bichloride solution. Sterilize the instruments by boiling, and take plenty of time in operating. A hasty jab will make too small a hole, and no relief will come from it. If the bulging is in the posterior and inferior quadrant, insert the knife, cutting edge down, a little above the center of the drum, and make your incision downward. In puncturing the membrane remember that its situation is not vertical, but that it inclines outward; consequently we must depress the handle of the knife in order to bring it at a right angle to the plane of the drum. Make the incision free, at least a third of the diameter of the membrane, and if you have pus to deal with, it is better to make a crucial

incision, so that there may be free exit for the offending matter. As soon as the drum is perforated, it is important that we wash out the canal with a bichloride solution 1-to-8000, as hot as can be borne, and then keep the meatus plugged with aseptic cotton to prevent infection from the outside.

When a discharge from the ear has been established, either by operation or ulceration, the after-treatment consists in keeping the patient in the house and washing out the canal two or three times a day with an antiseptic solution. In simple cases this is all that is necessary, and a few days sees the end of the trouble. If the discharge becomes thick and foul, and shows no disposition to cease in a few weeks, we then have the condition known as chronic purulent otitis media, and I must leave the consideration of this disease to some future period.

RENAL CALCULUS (NEPHROLITHIASIS—UROLITHIASIS).*

BY EWING MARSHALL, M.D., LOUISVILLE, KY.,

Chairman Medical Board, Home for Friendless Women; Physician in charge P. E. Orphans' Home; Surgeon for Travelers' Insurance Company, etc.

The title refers to precipitated urinary concretions formed in the kidney. They may remain in the kidney an indefinite period, even without any pointed symptoms, but again they quickly announce themselves by their symptomatology, which will be brought out later on. They are more frequent in the male, and more prevalent at the extremes of life. During the active adult age they are comparatively rare. Heredity plays a part, as they are even found in the new-born, and in that certain tendencies are undoubtedly transmitted. Malassimilation is a strong predisposing cause, and especially in the failure of the liver, either due to organic lesion of that organ or to some central lesion of the nervous system which inhibits the metabolism of the materials brought to it through the portal vein, and thus allowing them to pass into the general circulation in such condition that they reach the kidney and are easily deposited in the uriniferous tubules, called infarcts, or in the calyces and the pelvis of the kidney, then called sand or stone, according to their size.

Bouchard, in "Autointoxication," says: "Disturbances of nutrition rule, in my opinion, the largest number of chronic diseases, and explain the appearance of many illnesses of acute character, while diathesis is a permanent disturbance of nutrition."

Inflamed conditions of the kidney, especially the pelvis, predis-

*A paper read before the Louisville Clinical Society.

pose to calculi. It is more than likely that in most all calculi a little plug of mucus acts as the nucleus. Sedentary habits and luxurious living predispose to their formation. Clots of blood, shreds of tissue, and the ova of parasites have been found as nuclei, and when they reach the kidney may favor the formation of stone.

Uric acid calculi are by far the most common. Roberts says that five-sixths of all renal concretions are uric acid in character. Dr. Golding Bird's report, made about 1860, gives a great preponderance of uric acid stones. Tanner, Niemeyer, Beale, Prout, and a host of later writers, all say the great majority of nephritic stones are composed of uric acid.

Dr. H. V. Carter said he found among the specimens in the Grant Medical College Museum of Bombay very few uric acid nuclei, but many of oxalate of lime. Some writers claim that the rule is to have the mucus or other substance acting as a nucleus first covered with oxalate of lime, and then uric acid deposited on that as long as the urine remains acid. Uric acid may be passed as sand or form reddish-brown stones varying in size. In children we may find stones composed of urates alone.

Calcic oxalate calculi are the next most frequent, called mulberry calculi. They are hard, irregular, and dark brown or purple in color —generally a mixture of oxalate of lime and uric acid.

Calcic phosphate (rare) calculi are white and chalky in appearance.

Calcic carbonate (rarer) calculi are small rounded bodies and generally very hard.

The urostealith calculi are probably composed of some fatty material.

Blood calculi only occur in renal hematuria.

Ammoniophosphate of magnesia (very rare) calculi only occur in the presence of ammoniacal urine.

Edes says: "Uric acid infarcts become agglutinated by inflammatory material in the pelvis of the kidney and then serve as a nucleus for a phosphatic calculus." Neckel suggested stein-bildennen catarrh or stone-forming catarrh.

Xanthine and cystine are rare concretions. Scherer said stones are due to the decomposition of the urine during its abode in the urinary passages All concretions contain more or less organic matter. Uric acid infarcts are usually met with in the apices of the pyramids in the new-born and in early life.

Urate of soda infarcts, sometimes associated with urate of ammonia, are met with generally in gouty persons.

Lime infarcts are usually found in advanced life. Osler calls

attention to what is termed the dendritic form—wedge- or Y-shaped, blocking the ureter.

Sir William Roberts says: "High acidity, poverty in salines, low pigmentation, and high percentage of uric acid," predispose to the formation of calculi. Drinking-water which contains lime has been suggested by some to predispose to calculi. I have no confidence in this, for in our locality every one would have stone if lime-water played much of a causative part in their formation.

Too concentrated urine is a strong predisposing cause, whether acid or alkaline. Scherer said, first, acid fermentation, with deposition of uric acid or oxalic acid; secondly, alkaline, with the deposition of phosphate.

Symptoms.—A person may pass gravel for years without having colic, and may never go beyond this. Headaches and obscure pains credited to one thing or another, but really due to uric acid, may be present through years, and unless the brick-dust deposit in the vessel is seen, no thought of the kidney enters into the case. Calculi may go on forming for years with but slight symptoms, except when they pass out, causing colic. Even coral-like calculi may form in the pelvis, making a complete cast of it, with the impression of the calyces beautifully shown, and the subject may die of something else, never having been greatly disturbed by the presence of the calculi. However, these large calculi will naturally produce more or less induration of the kidney, and in a certian proportion of cases the most serious sequelæ occur, which are suppurative pyelitis and pyonephrosis. Again, a person may have repeated colic, and frequently cases have been recorded where the patients have passed hundreds of kidney stones, with the paroxysms of colic extending through years, and yet during the interparoxysmal period have spent useful, physically and mentally laborious, lives. There may be only a dull soreness, limited to the back, but nearly continuous in character, generally more pronounced on the affected side, though it may be referred to the opposite kidney, and there have been cases reported in which this discomfort was limited to the sound side. Bartholow says the pain may radiate upward to the corresponding shoulder-blade.

Hematuria is seldom profuse, but may persist for a long time. It is generally aggravated by exertion and lessened by rest. Frequently there is only a smoky hue observed in the urine. The urine may be free and normal in color for days, and then a prolonged exertion or more or less jarring of the patient may cause smokiness, or even blood may be passed in considerable quantity. Generally, though, it is not nearly so marked as in the late stages of tubercular or cancerous

involvement of the kidney. But the prominent symptoms are commonly limited to what is called renal colic.

Renal Colic.—This term has generally been used to designate the group of symptoms more or less present during the passage of a stone from the pelvis of the kidney through the ureter to the bladder. Sometimes a stone enters the ureter, producing colic, but after remaining in its entrance drops back into the pelvis of the kidney—at least such is the supposition from the history of a number of cases. A stone generally starts on its journey in the afternoon or evening. The chief reason of this fact is that exercise, and especially exercise in the erect posture, favors its engaging in the ureter. The pain usually comes on suddenly with little or no premonition. At the start, as a rule, the pain is most acute in the back and generally in the region of the affected kidney. Later, as the stone gets further into the ureter, the pain extends in almost every direction, but especially downward along the ureter to the testicle or glans penis, causing more or less retraction, and even extends down the leg to the foot. However, it frequently radiates over the abdomen and especially to the epigastrium, causing nausea and even vomiting. The patient at the outset becomes suddenly very sick; at this time he may have a decided chill, or only a chilly sensation; great restlessness is present; and, common in a marked case, you will find the patient tossing and tumbling around, and except in heroic natures the subject of intense fear. When the stone comes to a standstill, as it often does, there is more or less temporary relief. I remember the case of a child four years old that thoroughly illustrated that fact. As soon as the relief would come it would throw itself down anywhere and immediately fall asleep from exhaustion, to be cruelly aroused in a few minutes, and it would clutch at its abdomen, rolling on the floor, and cry out for relief. The pain varies in each case according to the kind and size of the stone. Of course, the outcries also vary greatly according to the disposition of the patient; great beads of sweat stand out on the forehead and run down the face. I have seen the night-dress decidedly dampened by the sweat. The pulse is generally rapid and the arterial tension high; but again it is occasionally the reverse. Most authors speak of the sudden relief, telling you the definite time when the stone drops into the bladder. That has not been my experience. The colic comes in paroxysms, as mentioned above, denoting that the stone has been temporarily quiet, and some sudden turn or twist—sitting up in bed, or getting on the feet to void the urine—will bring on a severe paroxysm; either it was quiescent and starts on its journey again, or several stones are being passed in rapid succession. If the patient is under the influence of an anodyne he

commonly has naps between the paroxysms, and when the stone passes out of the ureter into the bladder he falls asleep; but it is only shown by time and the finding of the stone that the relief was due to its discharge.

If the stone that is passing is of such size and shape as to completely block the ureter, and the kidney on the other side is healthy, then the urine passed during the paroxysm will be a healthy specimen. As soon as the stone either drops back into the pelvis of the kidney or into the bladder, then the urine will promptly show débris from the affected kidney and ureter. Micturition is usually frequent during the paroxysm, but generally small quantities are voided at a time. Purdy claims renal calculi are usually unilateral, and Bartholow says that two-thirds of his cases were limited to the left kidney. My experience is that it is the rule to have both kidneys involved where the stone is uric acid in character, the patient sometimes having colic affecting one side and at another time affecting the other side. I have never seen a case where stones were simultaneously passing through both ureters.

The duration of the attack varies very greatly. Niemeyer puts it: "Such attacks may pass off in a few hours, and rarely last over twenty-four." In children the passing of a stone may produce spasms.

Diagnosis.—Generally the diagnosis is simple, but in young children it is often difficult, and even in adults it is sometimes obscure, and only by the urinary changes, and especially the finding of the stone, can a positive diagnosis be made. I will mention the different troubles from which it must be differentiated: appendicitis; intestinal colic; lumbago, accompanied by a flatulent condition of the bowel; biliary colic; renal congestion, especially that due to malaria; stone in the bladder; renal cancer and renal tuberculosis; hysteria. My paper is too long for me to take these up separately, so I will deal with them in a general way.

The location of the pain and the way it radiates are strong diagnostic means. Retraction and tenderness of the testicle are differential points from most of these troubles, but not from stone in the bladder. Urinalysis, of course, will as a rule clear up the difference between renal calculus and the troubles above mentioned, but sometimes malignant disease or tuberculosis of the kidney will make urinalysis doubtful. Late in either, though, hematuria would be much more pronounced, and generally the history of the case would clear it up.

During August, 1899, I was called to a case which gave all the symptoms of renal calculus, but which proved to be a hysterical manifestation, for the urine was absolutely normal and remained so.

In very obscure cases there is only one sign that is positive, and that is finding the stone. Right here let me suggest a simple measure. Frequently men have colic, but cannot stay away from business the next day. Have them carry a thin rag with them, and every time they void their urine let it be through the rag, and then they will catch the stone if it passes. The pain in stone in the bladder is usually most intense about the beginning of the urethra, and the urine is generally alkaline.

Sequelæ.—Kidney congestion, sclerosis of the kidney, pyelitis, pyonephrosis, hydronephrosis, stone becoming impacted in the ureter, may finally cause perforation of the ureter and produce peritonitis. In rare cases where there is but one kidney, and plugging of the ureter leading from that kidney occurs, symptoms of suppression will come on. According to Ebstein, anuria lasting ten days is usually fatal, though he reports a case where it lasted thirteen days and the patient recovered.

Prognosis.—Niemeyer says, in spite of the formidable aspect of its symptoms, life is hardly ever endangered by renal colic. Osler says it is not incompatible with a long and useful life. My experience is that generally if you can control your patient you can in the majority of cases afford more or less permanent relief. Of course, in view of the danger of complications, your prognosis must be guarded.

Treatment.—During colic, preventing return. Renal colic when severe needs the most powerful anodynes known to the profession. Morphine combined with atropine used hypodermically heads the list. Remember two great dangers: First, do not be coerced into giving too much. The antidote to morphine is pain, but the pain in this trouble often suddenly subsides, and then the morphine may produce serious effects. Secondly, it being a trouble more or less periodic in character, there is danger of producing the morphine habit. Do not leave a morphine preparation to be used by the patient.

Often the paroxysms are so severe that it is wise to give chloroform by inhalation while waiting for the morphine to relieve the pain. Beware of any anodyne by the stomach. When there is such intense pain there is often no absorption from the stomach. Chlorodyne was given a patient of mine by a New York doctor. This is a remedy so indefinite in its make-up that I never prescribe it. The coal-tar preparations have been recommended, but my experience with them has been unfavorable. The following measures have been used with good effect: hot applications to the abdomen and back, hot-water bag, hot poultices, stupes, spices, turpentine, etc. A hot all-over bath, or hot-air bath, sometimes seems to give some relief.

Massage must be handled with care; it sometimes gives comfort to

the patient and hurries the stone's passage. Bouchard says: "Cutaneous friction increases urinary secretions." Some authorities have claimed in thin people to have been able to locate a stone in the ureter by palpation, and by gentle massage to hurry it along. This I greatly doubt. When there is a flatulent condition of the bowel complicating the renal colic, abdominal massage does much good. High enemata of hot water help to relax the ureter, more so if the trouble is on the left side, but sometimes even if the stone is on the right side. Hot drinks are comforting to some extent. If the stone is long in passing, fluid extract of belladonna in two-drop doses every hour is recommended by Henry Morris. Sir William Roberts says all diuretics must be used with caution. When the calculus has passed into the bladder it has been suggested that the patient allow the urine to accumulate in the bladder; then, lying face downward in a hot bath, forcibly expel the urine. Generally the stone will come with it. If it is of any size the patient will appreciate its passage through the urethra.

Preventing Return of Renal Colic.—(1) Water; (2) drugs; (3) diet; (4) exercise; (5) surgery. In any variety of stone water is useful—in fact, water is our greatest means of preventing further formation, and is our only hope (it is very slight) of in the least dissolving the stone. Beale says: "Other things being equal, those who habitually take large quantities of liquid in proportion to the food they consume will be less likely to be the subjects of calculus than those who take comparatively little." First one thing and then another has been suggested for different stones, but none have proved of much value. Lithia has probably enjoyed more reputation than any other one drug; however, its efficacy is very doubtful. Mr. Ure as early as 1860 objected to it. Mr. Alexander Haig in his brochure on Uric Acid says: "Lithia was at one time much used, then fell into disuse, and has finally been brought forward again; but at the present day there is by no means a unanimous opinion as to its value, many observers (Ebstein, Sir William Roberts, Lecorche, etc.) doubting its efficacy, preferring the salts of potash or soda." The alkaline treatment was probably originated with Joanna Stevens. There is a record that in 1739 she was given five thousand sovereigns by the British Parliament for her secret nostrum, which depended upon alkalies for its value. Its use is limited almost to uric acid stones, but they greatly predominate all others. Minute doses of potash or soda in large quantities of water with or without lithia has been the burden of the treatment. The different mineral waters generally have these as their basis of value with the public. These salts certainly have their place, but it is a small one, and the principal work done is the partaking of much fluid.

Where there is a calculus in the pelvis of the kidney there is no reasonable proof that we can dissolve it. Stones have been shown where their facets seem to indicate that they had been to some extent acted upon. I have little confidence in this, and experiments made by Sir William Roberts with different solutions seem to throw great doubt upon its usefulness, and yet he recommends a thorough trial of weak solutions of acetate or citrate of potash. Bristow, one of the greatest thinkers of this century, said Roberts's treatment had been disappointing, and that Golding Bird's phosphate of soda was no better.

Another fact should not be lost sight of in using the alkaline treatment, and that is that we may possibly, instead of dissolving a uric acid calculus, cause its rapid increase in size by the deposition of calcic phosphate. Sir William Roberts denied this, but Wood and Fitz in their late text-book on practice lay stress on its danger. When there is a phosphatic stone the alkaline treatment is positively contra-indicated, and nitromuriatic, benzoic, or boric acid is recommended. Tonics and complete mental rest should be enjoined in the phosphatic diathesis; tepid or cold bathing is useful in both uric acid and oxalic acid diathesis. "Notwithstanding all that has been said to the contrary," says Beale, "there is no doubt that in the cases we are considering the most important part of the treatment, and that for which no alternative or substitute can be found, is the administration of plenty of water."

Diet.—In the uric acid diathesis reduce very greatly the animal food, having the patient become almost a vegetarian, avoiding beer and wine. Authorities vary greatly about fruit. Personally I favor fruit in all varieties. Roberts says not to have too long intervals between meals, and urges four or five light meals a day on the ground that a meal both renders the urine more abundant and lessens acidity. In oxalic acid diathesis exclude all articles of diet containing it, and also saccharine matters.

Exercise. — When we speak of exercise we are upon disputed ground. At one time a fad of complete rest was tried, claiming the stone would become encysted. This was finally given up. Most writers either advise against exercise entirely, or urge great moderation. There is great unanimity in the opinion that a sudden jar or exertion is liable to start a calculus on its journey, or at least to produce hematuria, and the terrible fear of renal colic keeps a patient afraid of even taking needful exercise unless constantly urged. I am a firm believer in exercise, always within reason, but to the greatest possible amount short of much fatigue, and never in a jerky or spasmodic way. Exercise is extremely useful, and is of course an axiom in a general way, but in this very condition, excepting phosphatic

calculus, it serves many purposes. It lowers the acidity of the urine and thus promotes the excretion of uric acid. It promotes digestion in its broadest sense. It removes high arterial tension, if not done improperly. Sir A. Garrod says the great Cullen remarked that gout seldom attacked persons employed in constant bodily labor or those who live much upon vegetable diet. Beale says exercise, when it can be taken, is of the utmost importance. Sir William Roberts is not very outspoken about exercise, but he urges that we make our patient rise early and not have too long a period devoted to rest, for the reason suggested by Prout, that the recumbent position favored collections in the kidney pelvis.

Surgery.—Lastly, we consider the subject of surgical interference. In this day, when aseptic and antiseptic measures have so greatly lessened the dangers of entering any part of the body, certainly no one should be allowed to be incapacitated by a kidney stone. However, as Osler says: "Surgery should only be appealed to when the colics recur so frequently as to interfere with the occupation, or when some serious intercurrent trouble announces itself; for remember stone in the kidney is not inconsistent with a long life of great usefulness with a fair measure of health."

A JAPANESE paper says: "The American ambulance corps has done some excellent work. Their stretchers are the best in the field and show the wonderful inventive faculty of the Americans. The handles of these stretchers are so arranged that they can be formed at once into supports by a clever mechanical contrivance, so that these stretchers can be used as beds or benches for surgical operations. The advantage of this system cannot be too much commended, for on ground so swampy and hot as the soil of China the wounded men cannot safely lie long pending the treatment on the spot; and this inconvenience is removed by the American invention. Sixty men were thus treated directly where they fell who otherwise would have died. The Japanese medical staff refer to the fact in most praiseworthy terms."

As Chinese affairs are very much to the fore just now, it may be interesting to mention that a doctor's fee is perhaps the smallest in the world, ranging from four to ten cents, but this can be accounted for by the fact that any one can practice, it only being necessary to hang out a sign intimating the fact that the owner has some medical knowledge; and although these are very numerous, they are, as a body, the most respected men in China.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE PROFESSIONAL SPIRIT.

Notwithstanding their usual endowment with more than the usual portion of sound philosophy, it is not at all uncommon that professional men chafe under the maturing knowledge that they are unlikely to realize in their entirety the objects of their first ambitions and aspirations. They may even join in the popular statement that luck lifts up and pulls down.

The fickle goddess may aid material fortune and favorable circumstances help smooth the professional way; but neither commands the approaches to the citadels of easy income and secure name. It is the spirit of the man, encased in armor of superior knowledge and skill, the best-grounded, well-headed, and carefully advanced, which rides the crest wave. Resoluteness is an essential factor, but not confined to the van. It is the badge of all stages of professional progress; it is at the foot as well as at the top of the ladder.

Professional aspiration, when exactly suited to one's native qualifications and capacities, is one of the first and richest experiences in all life. No other disciplinary force outranks it; in the sure and steady uplift of ideals and conditions it holds an important station. Step after step joins self-denial to kindled energy; work and duty are twin helpers and the chief support. The spirit within is strengthened by contact with things without; prosperity and adversity are alike turned to account.

Actual security in one's profession is a sort of mastery of the world. Disappointment, reverses, and weariness remain, but they beat against impenetrable armor. Disgrace may come as near as the club or the home, but it flees from the man. As well attempt to bind the ocean with straws as to undermine such a foundation for character and usefulness. The ripened fruit of genius could ask no more.

There is no life more real and earnest than that of the physician; much of human welfare is in his care and keeping. In his personality the practical and the ideal exist side by side, but unite in the accomplishment of ends. Influence goes beyond arm's length, while the chief monument is the contribution to the physical and mental strength and vitality of the race.

The leaders in the world of thought, letters, and commerce all have in them more or less of the professional spirit. It is a broad, constructive, and conserving power, making keen the mind and strong the muscles in all profitable doing. "For the highest good"—watchfulness of one another for good and not for evil—is the wording on its banner.

Even were monetary rewards and passing favors of blind fate's bestowal, the same could not be said of the professional spirit. That is the outgrowth of individual endowment and adaptability, developed by personal force. It is a gleaner from the cleanest and best fields in the world. It is the yardstick by which men whose lives and labors are consecrated to healing and preserving ends measure everything else. And the longer and broader the gauge, the larger the person and sphere of the user.

EDITORIAL NOTES.

The Use of Formaldehyde in Preserving Milk.

There has been during the past few months a great deal of discussion all over the country as to whether or not dairymen should be allowed to use formaldehyde in milk. In various sections the milkmen have been arrested and fined for making use of it. It has been pretty generally conceded by those in a position to judge that the use of formaldehyde as a food preservative is deleterious to the economy, hardening as it does meat and fish, and rendering them unfit for use. It is to be hoped that the use of this agent will be forbidden by law.

The Contract Surgeon in the Philippines.

From the number of complaints which from time to time appear in the medical press, and from the number of contract surgeons in the Philippines who have attempted to resign owing to the poor treatment they receive, it is clearly shown that the life of a medical man under such circumstances is indeed a trying one. It is sincerely to be hoped that Congress will accept the suggestions of Surgeon-General Sternberg for the betterment of those who are serving the government in this manner, and pass some sort of legislation whereby these men may be given the recognition due them.

ITEMS AND NOTES.

TYPHOID FEVER at present prevails to a great extent in Paris.

A CHILIAN medical congress is announced for December of this year.

AN emergency hospital is to be established in the stock-yards at Chicago.

A CASE of bubonic plague has been reported from Buenos Ayres, and another at Rio Janeiro.

A NUMBER of physicians in Dallas, Texas, purpose establishing a medical college in that city.

W. B. SAUNDERS & CO., medical book publishers, have established a branch in London, England.

IT is reported in Paris that a terrible epidemic of yellow fever is raging in Senegal, West Africa.

THE Cornell Medical College is now nearly completed. It has cost, including the site, more than $600,000.

PROFESSOR K. GEGENBAUER, professor of anatomy at Heidelberg, has resigned his chair on account of ill health.

DR. A. RAVOGLI, who has for sixteen years been Italian consul in Cincinnati, has resigned his diplomatic position.

IN the twenty-seven years from 1870 to 1897 but fifteen women graduated in medicine in the universities of Italy.

A CONGRESS of French-speaking physicians and surgeons of America is proposed by the Société Médicale de Quebec.

SMALLPOX has broken out among the Indians on the Turtle Mountain Reservation in North Dakota, near the Canadian line.

RECENTLY a steamship from Glasgow was held in quarantine at Philadelphia on account of the bubonic plague raging in that city.

PROFESSOR A. VON ROTHMUND retired from the chair of ophthalmology, Munich, on his seventieth birthday, after an incumbency of forty years.

PROFESSOR OSLER, of Baltimore, has, according to the *Polyclinic* for August, become a vice-president of the London Medical Graduates' College.

THE total number of students in the faculties of medicine and surgery of the Italian universities during the present academic year (1899–1900) is 6388.

DR. JOHN B. MURPHY has accepted a professorship in surgery and clinical surgery in the Northwestern University Medical School, Chicago Medical College.

DR. H. S. KISKADDEN has been appointed by the Governor of Michigan a member of the Detroit Board of Health to succeed Dr. B. H. Lawson, resigned.

THE lumbermen's hospital at Brainerd, Minn., has been sold, together with twenty acres of land, to the Benedictine Sisters of Duluth, for the sum of $9000.

THE proposition of the United States government to build a new large base hospital at Nagasaki, Japan, has been abandoned, owing to the fact that our troops may soon be recalled.

THE Thirteenth International Medical Congress has bestowed the prize of $1000, which was founded by the city of Moscow in 1897, on the Spanish scientist Prof. Ramon y Cajal, of Madrid.

AFTER the first of the year the hospital on Blackwell's Island, New York City, will be made a general isolation hospital for cases of tuberculosis, under the care of the Department of Charities.

DR. EDWIN KLEBS, who has for a number of years been professor of pathology in the Rush Medical College of Chicago, has resigned and will return to Germany, there to take up his permanent residence.

DR. ARCHIBALD CHURCH has been recently appointed professor of nervous and mental diseases in Northwestern University Medical School, Chicago Medical College, and head of the neurological department.

DRS. CAHNHEIM, of Dresden, and E. Ehlers, of Copenhagen, have completed their study of leprosy in Crete. They find the disease of a mild type, with a tendency to recover, favored by the climate, and not spreading. They estimate the total number of lepers on the island to be about 700.

THE daily press reports that a disease has become epidemic in New Bedford, Mass., which is greatly mystifying the Board of Health of that city. The mysterious disease approximates both smallpox and chicken-pox in its characteristics, but differs from both in essential particulars. A house-to-house inspection has been instituted.

Dr. George P. Dreyer, of Johns Hopkins University, has been elected professor in charge of the physiological department of the College of Physicians and Surgeons, medical department of the University of Illinois.

The second annual meeting of the Rocky Mountain Interstate Medical Association was held at Butte, Montana, on Tuesday and Wednesday, August 28 and 29, under the presidency of Dr. C. K. Cole, of Helena, Montana.

Dr. John Guiteras, formerly professor of pathology in the University of Pennsylvania, has been appointed to a similar position in the University of Havana. He has also been made editor of the *Revista de Medicina Tropical.*

It is announced that the civilian surgeons at present serving with the troops in South Africa are to be offered commissions in the Royal Army Medical Corps, by which means it is hoped to fill some, at any rate, of the numerous vacancies in that discredited service.

Tuberculosis has been decided by the Secretary of the Treasury and the Commissioner of Immigration to be a contagious disease, and immigrants suffering from the disease will not be allowed to land in the United States. This was brought about by the refusal of the San Francisco authorities to allow a Japanese clergyman afflicted with tuberculosis to land.

The twelfth annual meeting of the Tri-State Medical Society will meet at Chattanooga, Thursday, Friday, and Saturday, October 11, 12, and 13, 1900, just after the meeting of the Mississippi Valley Medical Association, Asheville, N. C. A rate of one fare for the round trip will be in force on the occasion of the reunion of the Army of the Cumberland and the Spanish-American War Veterans.

Dr. Carles, a French physician, who has, according to the *Philadelphia Medical Journal*, given much time to the study of army life, says that young men who spend a few years in the service have better health than those who remain at home. He says that military service makes men better able to ward off disease. Open-air life, regular hours, frequent exercise, are in themselves factors to good health. The latest statistics of the French army show that men who have served for more than a year are better fitted to ward off disease than those who have just entered the army. Many prominent army surgeons are interested in his statements and the statistics quoted in proof thereof, and are of the opinion that his views are applicable not only to France but to any other civilized country.

Director Calmette, of the Pasteur Institute at Lille, has discovered the champion snake-killer in the world. The great serpent destroyer is a French peasant named Courtol, living on the banks of the upper Loire. This part of France is thickly wooded, and this year snakes overrun the country. They are so numerous that the authorities were compelled to offer a prize of 25 centimes for every snake captured, dead or alive. Women and children were afraid to venture on the public highways for fear of being bitten. All the farmers are now engaged in snake-hunting, and the Lille authorities are daily besieged with men who bring in snakes in large quantities. Courtol, however, beats them all. His captures average one hundred snakes daily, which net him 25 francs, big wages for a Loire peasant. Director Calmette added considerably to Courtol's wages by giving him orders to send him live snakes. Now he has had to countermand the orders, as Courtol is sending him so many boxes filled with serpents that he can find no place to store them. Courtol has two suits and a cap made of serpent skins, and when arrayed in these he looks very fantastic.

A Russian explorer, Dr. Chaniavsky, writes in a recent number of *Vratch* that on the way from Teheran to Bagdad he passed by Hamadan, the ancient Ecbatana, which was formerly the capital of Media. Of the old city nothing remains but heaps of stones and dust. The tomb of Avicenna, the greatest of the Arabian physicians, is still, however, venerated by the inhabitants of the country. It is mentioned by Reclus in his Geographie, 1887, ix, p. 213, and was pointed out to Dr. Chaniavsky by Dr. Holmes, an American medical missionary, who has lived for many years at Hamadan. On the left bank of one of the streams which run through the town from south to north, behind an old disused graveyard, there is a brick-field in which stands a small mausoleum surmounted by a cupola of clay. A small doorway affords entrance to the interior, where under the cupola there are two large stones covered with Arabic inscriptions. Under one of these lies Avicenna, known to the ordinary folk in the district as Ibn-Cina, and to the dervishes as the Sheik Bon-Ali-Ibn-Cina; the other marks the resting-place of the Sheik Abdul-Ceid-Abdul-Cheir, who is venerated as a saint, but is otherwise unknown to fame. The tomb of Avicenna is guarded by three dervishes, and it is interesting to learn that every day it is visited by numbers of sick persons. The knowledge and skill of most practitioners of the healing art are interred with their bones, and the famous Arabian physician must be almost unique in his power of continuing to attract crowds of patients a thousand years after his death.

NEW PUBLICATIONS.

SAUNDERS'S MEDICAL HAND ATLASES.

The diseases caused by accidents are sufficiently important to demand their treatment in a separate volume of this excellent series of handbooks. Dr. Golebiewski's work will be found a concise and useful manual which supplies a deficiency in medical literature. Its many illustrations and its large number of descriptive cases constitute the work an exceedingly valuable one, not only to the physician, but to the lawyer and the layman whose interests are connected with accident insurance. The medicolegal relations of diseases caused by accident are indeed among the most important of the considerations, and this will be found an invaluable manual in the study of cases in which exaggeration of symptoms and simulation are suspected to be present. The colored plates are copied from the original water-colors done for the most part from life by Herr Fink. This volume fully maintains the high standard of excellence achieved by its predecessors, and entering as it does upon a field in which we have still much to learn from experience the work will be doubly valuable.

Atlas and Epitome of Diseases Caused by Accidents. By Dr. Ed. Golebiewski, of Berlin. Authorized Translation from the German, with Editorial Notes and Additions, by Pearce Bailey, M.D. Forty Colored Plates, and 143 Illustrations in Black. Philadelphia: W. B. Saunders & Co., 1900.

ATLAS OF GYNECOLOGY.

A new edition has been called for of Dr. Schaeffer's Atlas of Gynecology. The value of the atlas to the medical student and the general practitioner will be found not only in the text, but especially in the illustrations. The delineations of the artist, Herr Schmitson, are realistic in the extreme. The manual will be found one of the most practical of this exceedingly valuable and useful series. Differential diagnosis has been made easy by the exceedingly clear and lucid text, and the wonderfully fine illustrations. Nothing but success can be achieved by this excellent manual.

Atlas and Epitome of Gynecology. By Dr. Oskar Schaeffer, Privat Docent of Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the Second Revised and Enlarged German Edition. Edited by Richard C. Norris, A.M., M.D. With 207 Colored Illustrations on 90 Plates, and 62 Illustrations in the Text. Philadelphia: W. B. Saunders & Co., 1900.

DISEASES OF THE EYE.

It may be said with apparent truth that with so many comparatively new text-books on diseases of the eye there exists no demand for another. However, the student will find this little manual an acceptable guide and a means of acquiring a foundation of all that is important for him to know in ophthalmology. The author has a concise and happy style in imparting his instruction. The general practitioner will receive much benefit from a careful perusal of this little work. The manual is richly supplied with original illustrations.

Diseases of the Eye. For Students and Practitioners. By Charles W. Hay, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department Columbia University, New York. With 243 Original Illustrations, Including 12 Colored Figures. New York: Wm. Wood & Co. 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Progress in the Treatment of Fractures Since the Introduction of the Roentgen Rays.

Prof. E. von Bergmann, of Berlin, at the recent meeting of the Thirteenth International Congress of Medicine (*British Medical Journal*, Aug. 18, 1900), presented a communication on the progress in the treatment of fractures made since the introduction of the Roentgen rays. During the last ten years our knowledge of fractures has made important progress in two particulars: first, in regard to the operative treatment of certain simple fractures, with the object of effecting exact coaptation of the fragments; secondly, the diagnosis of the seat of fracture and the pathological anatomy of the bone lesions by means of radioscopy and radiography. There are obvious local causes that hinder the union of fractured surfaces; it is known, for instance, that in a broken femur the interposition of muscular fibers prevents the formation of the callus. Unfortunately, it is not possible with the help of the Roentgen rays to define this with sufficient exactness to warrant an incision. We can only suppose that the case is so if in the image given by the fluorescent screen we see a gap between the bone surfaces, separated from each other in the sense of a *dislocatio ad longitudinem*, and this gap always remains equal in the most various positions in which we may place the broken limb. There are, however, other local causes of want of union which are shown clearly by radiography; this is particularly the case in fractures of joints and of small bones. It is sufficient to quote an example, namely, fracture of the patella. Malgaigne had deplored the frequency with which cases of fracture of this bone remained unhealed, and recommended long before the antiseptic era an operative intervention by the application of the hooks known by his name. These hooks, however, are much more dangerous than incision and suture of the fragments with silver or bronze aluminum wire.

Examination of fractures of the patella by means of radiography reveals three principal obstacles to union: (1) The inequality in the size of the fragments, the upper being much larger than the lower; they therefore require wiring to keep them in place. (2) The number of the fragments. In addition to the two principal fragments there are small accessory fragments, or small splinters, which slip into the line

of fracture, and thus prevent accurate coaptation. (3) One of the fragments may be displaced by a movement of rotation in such a manner that the fractured surface of the other fragment meets it at its outer surface, so that contact of the fractured surfaces cannot take place. These various displacements being made visible by radiography, the surgeon is able to make up his mind as to the necessity of an operation, and to search for the seat of fracture, so as to remove the obstacles which have been mentioned, and wire the broken fragments together. Bergmann, in his clinic, has obtained complete bony union in more than twenty-five cases of this kind. The operations proved that the union was bony, and not fibrous, and that the metallic suture cured speedily and permanently. Therefore the operation is the general mode of treatment of fracture of the patella.

Results Obtained by Operative Surgery in Constriction of the Urethra.

Few operations, says D. Heresco (*Medical Press*, Aug. 22, 1900), have given rise to more discussion than those practiced for constriction of the urethra. Although opinions do not agree as to the value of all surgical interventions, it may be said with truth that the practice of surgeons concerning these operations varies but slightly; yet there is more than one point upon which more definite information should be acquired.

Of any operation actually known to have been performed for the cure of urethral stricture, no absolutely perfect cure has been effected excepting by means of excision.

Internal urethrotomy, employed in cases of blennorrhagic stricture where more or less complete sclerosis of the urethra has taken place, is not of itself a curative operation, but must be followed by dilatation. Every case of internal urethrotomy, unless followed by dilatation, will assuredly result in a recurrence of the stricture. The time that the renewal of the stricture takes to establish itself varies from a few weeks to many years, and depends upon the character of the stricture and the manner, more or less complete, in which the subsequent dilatation has been effected.

External urethrotomy does not insure a more perfect cure than does internal urethrotomy. Recurrence follows the same as after internal urethrotomy, and the period required for the reestablishment of the stricture is equally variable.

When the perineum is affected with fistulæ, indurations, or callosities, external urethrotomy presents great advantages over internal urethrotomy, because the liberation is effected outside the perineum.

Excision of the urethra under certain conditions stated will insure permanent relief, but these conditions are rare.

All operative interventions should be followed up by preserving dilatation.

The Relation of Surgery to Diabetes.

C. R. Gildersleeve (*Journal of the American Medical Association*, Sept. 1, 1900) says that he would not operate on any patient suffering from diabetes without first explaining either to the patient or some one in authority the possibilities which might follow; that he would refuse to operate on an elderly diabetic subject for any of the simple affections, such as benign tumors, etc., unless there was some special reason for operating, and it is certainly a good rule, he says, to always examine the urine in any case of gangrene occurring in elderly people; that in the painful, rapidly spreading gangrene which often occurs in cases of diabetes, and which is bound to cause their death if left alone, the writer believes in prompt and high amputation. He waits, as a rule, until a line of demarcation forms; but in some cases, although the line has not formed, one can judge fairly well about how high it is going by the appearance, and in such a case the operation should be performed before the line has actually formed. Some of the cases are inoperable. They may have complete gangrene of the foot, and the leg may be in good condition. Again the leg may be indurated and boggy, and this condition may extend as high as the knee or above it, and it would be poor judgment to operate on such a case. Another class of cases is the dry, comparatively painless gangrene which often affects the toes in these patients. These cases will often run their course and be cast off, and as a rule they should be left alone, so far as operations are concerned. Furuncles and carbuncles frequently occur in diabetic patients. The furuncles will generally succumb to the usual treatment for diabetes. In the case of carbuncles, however, surgical treatment, such as hot applications and the knife at the proper time, is required.

Perforation in Typhoid Fever from an Operative Standpoint.

G. G. Davis (*American Journal of Surgery and Gynecology*, September, 1900) says the subject of operating for perforations in typhoid fever is still so recent that additional experiments and data are desirable to enable us to formulate rules of procedure. Leucocytosis is a confirmatory sign. Hemorrhage is accompanied with a sudden fall of temperature, but not by a sudden increase of abdominal symptoms.

Dulness in the right iliac region is not to be expected in cases of perforation. Localized impairment of resonance may be due to free abdominal fluid; change of position causes it to disappear. Localized pain and dulness may be due to a plastic peritonitis around the site of perforation. This may be observed perhaps in one case in ten, possibly one in five. It is impossible to recognize that a perforation is about to occur. It is not necessary to operate before a perforation occurs, but it is necessary to operate before collapse is marked. Typhoid fever patients when not in total collapse bear operation much better than was formerly expected. Patients operated on in marked collapse are liable to die on the table. I know of some such cases. Washing out the abdominal cavity with hot normal salt solution, even if no perforation is present, seems to improve the condition of the patient at the time of operation, and to favorably influence the subsequent course of the disease. Operate as soon as the diagnosis of perforation is made. It is less dangerous for the patient to run the risk of having an operation done during the first period of depression than to wait and run the risk of having collapse preclude all operative measures. In operating incise as for appendicitis, and not in the median or semilunar line.

Excision of the Testicle, Vas Deferens, and Vesiculæ Seminales for Tubercular Disease.

Every case of advanced tubercular testicle, says G. A. Peters (*Canadian Practitioner and Review*, August, 1900), should be dealt with by operation, and if the disease is found to have spread up the vas to the vesiculæ seminales, the whole tract should be ablated. It should be the aim of the surgeon to remove every particle of the disease as clearly as in a case of carcinoma, but failure to secure every atom of disease is much less disastrous than in the case of carcinoma, since the resistance of the tissues to the ravages of tubercle is very considerable. The patient should be placed under the same hygienic conditions as are found to be favorable for recovery from tuberculosis in other parts of the body.

MEDICINE.

The Coma of Diabetes.

Professor Jaccoud (*Medical Press*, Aug. 29, 1900) distinguishes three clinical forms of coma in glycosuria:

1. The gastrointestinal form, by far the most frequent. It sets in by inappetence, slow digestion, and obstinate constipation. To these

initial manifestations are added, in a short time, pain in the right hypochondriac, nausea, vomiting, prolonged respiration, acceleration and weakness of the pulse, and all that without fever; on the contrary, at an advanced period at least, there is generally hypothermia. The urine and the breath of the patient give off an odor of acetone—that is to say, an *odeur pommace.* In a short time nervous agitation sets in; the patient becomes apathetic, somnolent, while the temperature goes below the normal. The somnolence gives place to coma, and the patient succumbs in three or four days.

2. Vertigo is much less frequent. It sets in by headache and vertigo; the patient must not maintain the upright position for any length of time. Coma appears in a few hours, and death takes place with great rapidity.

3. Cardiac form; exceptional. By its character it resembles cardiac paralysis. It is generally provoked by a forced muscular or some extraordinary effort. At first the patient experiences a sensation of great prostration, the pulse becomes weak and irregular, and the extremities cold. Cyanosis follows, and at the end of a few hours the patient dies.

The cause of diabetic coma is admitted by all to be an autointoxication due to an excess of acids in the blood, that of oxybutyric acid in particular.

The prophylactic treatment is naturally essentially alkaline—bicarbonate of soda in large quantities by the mouth (one ounce daily) and a substantial régime. The attendant, when he finds himself in the presence of a diabetic patient suffering from inappetence, dyspepsia, and prostration, should be reminded that an attack of coma is imminent, and should examine the urine for acetone.

Acute Edema of the Lungs.

J. A. Lesage (*L'Union Médicale du Canada*, June, 1900) publishes an elaborate paper on the subject from which he draws the following conclusions:

Acute edema of the lungs is a serious complication of acute or chronic nephritis associated or not with cardiovascular lesions. The onset is sudden, the attack occurring without premonitory symptoms in apparently healthy individuals.

Acute pulmonary edema is characterized by an extreme dyspnea accompanied with cough and the expectoration of pinkish and spumous secretion. Auscultation discloses the presence of innumerable fine subcrepitant râles which encroach rapidly upon both lungs. Albumin is a constant feature in the urinalysis.

The prognosis is serious and materially depends upon the treatment instituted. The main features of this treatment are copious venesection, dry cupping, cardiac stimulants, alkaline drinks, and strictly milk diet.

Morphine is absolutely contraindicated in acute edema of the lungs.

Pathology and Treatment of Pneumonia.

Pneumonia, according to Nathan Raw (*Liverpool Medico-Chirurgical Journal*, July, 1900), says that this disease seems to occupy a middle place between specific fevers and local inflammation, with many points in common with both. One time it will present almost exclusively the characters of a local disease, at another those of a virulent specific poison, especially if associated with influenza. Some cases will recover without special treatment, and others are hopeless from the beginning. The writer says he feels sure that the treatment in the future will be the antitoxic treatment, used early so as to abort the disease by destroying its toxins.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE DIRECTION OF THADDEUS WALKER, M.D.,
Microscopist to Harper Hospital, Detroit.

The Distribution of Connective Tissue in New Growths.

From his studies of the distribution of connective tissues (viz., yellow elastic, white fibrous tissue, and reticulum) in seventeen new growths, W. C. White (*Johns Hopkins Hospital Bulletin*, September, 1900) has drawn the following conclusions:

1. Elastic fibers are frequently present in new growths: (*a*) in the stroma; (*b*) among the cells; (*c*) around the blood-vessels; and (*d*) in breast tumors around the lactiferous ducts which have been included and invaded by the growth.

2. When present they are usually in connection with preexisting elastic tissue elements in the original tissue in which the tumor has grown.

3. New formation probably occurs, but can only be determined by a comparison of that present in the growth with that present in the normal tissue in which the growth has arisen.

4. Sarcomata present a large increase in connective tissue and possess an exceedingly fine intercellular reticular network very similar in structure to the reticulum present in normal glandular tissue.

5. Carcinomata possess a stroma of white fibrous tissue, outlining the cell spaces, but have no intercellular network.

6. The digestion methods present a possible means of diagnosis between carcinomata and sarcomata in doubtful cases.

7. Uterine myomata have a very large amount of connective tissue both of a white fibrous and reticular nature, possessing a connective-tissue capsule for each muscle cell; and it would be more correctly termed fibromyomata.

The Effect of Some Anesthetics on the Kidneys.

At the recent meeting of the British Medical Association, Dr. D. W. Buxton and Dr. A. G. Levy (*Lancet*, Aug. 25, 1900) read a paper on this subject. These observers had made physiological experiments on animals, and observations on human beings undergoing surgical operations. In dogs they had repeated experiments published by Kemp and Thomson, who found that ether produced shrinkage of kidney volume, accompanied by albuminuria and partial or complete suppression of urine. Dr. Buxton and Dr. Levy had only been able to corroborate this in five dogs out of twelve, although the anesthetic was fully pushed, and then only when the administration had been prolonged and the dosage great. They had never observed complete suppression, and such retardation as did occur passed off on cessation of anesthetization. In man they found that during the twenty-four hours following anesthetization the urine was diminished in quantity, but of higher specific gravity. The latter suggested that excretion had not been impaired by the anesthetic, and the former was (at all events largely) due to, for example, purgation, diminution of intake, and occasionally to vomiting. In only 2.7 per cent of their cases had they found albuminuria after anesthetics unless present before, though albuminuria when already present was not infrequently increased by the anesthetic. They attributed Kemp and Thomson's "ether effects" to excessive use of the drug.

On the Histology of the Islands of Langerhans of the Pancreas.

The pancreas, says E. L. Opie (*Johns Hopkins Hospital Bulletin*, September, 1900), is much more complex in structure than the other glandular organs which it closely resembles. Langerhans, in an inaugural dissertation published in 1869, gave the first careful description of its histology, and showed that the organ has not the relatively simple structure of salivary glands. The islands of Langerhans, says the writer, are composed of cells having the same

origin as those of glandular acini, which form structures which are independent of the secreting apparatus, and in intimate relation with the vascular system. In the splenic end of cat's pancreas, they have a definite position within the lobule, each of which contains one of these structures. In the human pancreas they are more numerous in the splenic extremity or tail than elsewhere. Similar variation in their number is observed in cats and dogs. Prolonged stimulation of the gland does not, as claimed by Lewaschew, transform groups of acini into islands of Langerhans.

THERAPEUTICS.

Typhoid Fever and Artificial Serum.

M. Bosc, in a paper on this subject before the Paris Academy of Medicine (*Medical Press*, Aug. 22, 1900), says that besides the two usual methods of treating typhoid fever—cold baths and the employment of caffeine—a place ought to be given to subcutaneous injections of artificial serum. It is a therapeutic procedure which seems to reunite the effects of the cold baths and those of the caffeine, and on the other hand it presents the advantage of being applicable to all stages of the malady and to all ages.

Employed in subcutaneous injections at the daily average dose, the artificial serum produces in typhoid patients two orders of phenomena. In the first place is witnessed reactional phenomena (sweating, abundant micturition, nausea, etc.), which are relatively little important, and which are not slow to yield place to post-reactional phenomena, which are much more lasting, twelve to thirty-six hours, and are characterized by a rise in the blood-pressure, an increase of the cardiac energy, a lowering of the temperature, and a greater activity of the emunctory organs, especially witnessed in the kidneys. The only counter-indication that might be suggested to the employment of these injections is the possibility of forcing the arterial tension in certain cases accompanied with visceral congestion, but the fear of that accident is not justified, as the effects of the hypertension provoked by the injections are compensated by the diuresis produced by the injections.

M. Baylac (Toulouse) thought that by injecting every day for three weeks or a month a dose of serum under the skin one is exposed to septic accidents. He prefers enemas of salt water (one teaspoonful to a quart of boiled water), which produce when given twice a day excellent results, the diuresis following the enema being considerable.

M. Bosc replied that where the rules of antisepsis are rigorously

observed, the danger referred to by his colleague is not possible, especially where the needle is plunged deeply into the muscular tissue. As to the enemas of salt water, he does not consider them sufficiently active in grave cases.

Urotropin in Posterior Urethritis.

Gerald Dalton, M.S.A., London, says in the *Therapist:* "Of the many new drugs which are from time to time brought before the profession, some of which unfortunately are of little use, urotropin, as a urinary antiseptic, appears to be of great utility. Nicolaier, Kelly, and Wilcox have all reported much benefit from its use in cystitis and as a uric acid solvent. It may, therefore, be of some interest to record the results of treatment by it of gleet caused by posterior urethral troubles. In the five cases recounted, most decided and marked benefit must be referred to the urotropin alone; the local and other treatments having improved matters up to a certain point, and then apparently ceased, a state of things unfortunately only too common in the cure of these troublesome complaints. In two other cases doubtful relief was obtained, due, however, in both to the patient's neglect of treatment and of abstinence from excess of alcohol. Whilst in several other cases, now under observation, a complete cure has not yet resulted, in no case, up to the present, can I record a complete failure of the drug.

"A. B——, aged twenty-eight, had gonorrhea four months ago, since when a gleet had continued, for which he had been treated by injections of zinc and pot. permang., and had taken santal oil. First came under my observation eight weeks ago. Urethroscopically a membranoprostatic catarrh was shown. He was irrigated with hydrarg. perchlor. c. ac. carbolic sol., and later instillations of protargol, one- to five-per-cent, with saw palmetto and santal oil internally. The lesions had greatly cleared up, and then came to a standstill, and for a fortnight there was little or no improvement. Urotropin, seven grains *ter in die*, was given, and on the fourth day the urine was hardly cloudy, only a few beads of discharge, all of which had entirely disappeared by the tenth day."

The Treatment of Whooping-cough.

At a recent meeting of the New York Academy of Medicine, C. G. Kerley (*Pediatrics*, May 1, 1900) in a paper on whooping-cough said that every case of whooping-cough may be relieved, either by modifying the severity or diminishing the number of the paroxysms; the duration of disease is probably not shortened by treatment; remedies

sedative in character, with fresh air, give the best results; if the remedy is to be of service, its beneficial results may be noticed within twenty-four to forty-eight hours. The best results are obtained when antipyrin and the bromides are commenced at the height of the paroxysmal stage and then pushed vigorously; being sedative in character, the good effects may be lost in a prolonged case; and children may have whooping-cough and never whoop.

Psoriasis Cured by Thyroidin.

At a recent meeting of the Berlin Medical Society, H. Ewald (*Medical Press*, Aug. 29, 1900) showed a case of psoriasis cured by thyroidin. The patient had suffered for two months from extensive psoriasis on the body, buttocks, thighs, shoulders, etc., and by the use of 450 tablets of 0.1 gramme each had been quite cured, a slight redness only remaining. The patient had, indeed, taken arsenic as well, but only in three-drop doses, the total amount being 0.6 gramme of arsenious acid. No toxic symptoms had been caused by the rather large doses of thyroidin.

Atropine Injections in Ileitis.

Batsch (*Münch. Med. Woch.*, No. 27, July 3, 1900) refers to his former articles on the subject, published in the same paper in 1899, and reports two further cases of severe ileitis which were successfully treated with hypodermic injection of one-twelfth grain of atropine. In each case the patient presented fecaloid vomiting, and the injection was tried as a last resort before proceeding to celiotomy.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Large Tuberculoma of the Nasopharynx.

Smithinsen (*Münch. Med. Woch.*, No. 15, 1900) has reported at length a case of interest in the literature of tuberculous growths in the nose and pharynx.

Tubercular tumors in the nasopharynx are of very rare occurrence. The symptoms in this case began with trouble in swallowing and increasing difficulty in nasal breathing; severe headache prevented sleep; fetid discharge from the nose and pharynx. Examination showed a tumor of dark red color, with intact mucous membrane on the posterior pharyngeal wall above the palate. The cervical glands

were not enlarged, only the left submaxillary. The patient was forty-five years of age. Diagnosis lay between sarcoma, carcinoma, and syphilis. A part removed for microscopical examination showed giant cells and tubercle bacilli.

The tumor was removed without much hemorrhage.

On probing, a long hole was entered and bare bone felt. A sharp spoon was then used through the nose, and bits of bone removed from the sphenoid and occipital bone. The author considers that it might be a mixed infection of tubercle and syphilis. Inunction had no effect. The patient died three months later from general tuberculosis.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

An Epidemic of Erysipelas in the Aural Hospital at the University of Strasburg.

Dr. F. Alexander (*Archives of Otology*, Nos. 2 and 3, 1900) in his annual report mentions an epidemic of erysipelas, which appeared in the hospital at two different periods during the summer and late fall. An outside physician suffering from erysipelas of the head transmitted the infection into the operating-room. All precautionary measures, immediately used, could not prevent the infection with erysipelas of nine patients operated upon from April 1, 1898, until April 1, 1899, among sixty-nine cases.

The course of the erysipelas ran about the same in all of the nine cases. The temperature varied from 38.8° to 40.9° C. The diseased portions of the skin were intensely swollen, highly reddened, their surface shiny, and mostly painful to the touch. One case ended fatally, and this began and ran its course under the severest symptoms. In the treatment of the wound during the erysipelatous disease, dressings moistened with a two-per-cent solution of carbolic acid were almost exclusively used.

The Jequirity Treatment of Trachoma.

Masselon (*Die Oph. Klinik*, May, 1900) deplores the fact that this method of treating trachoma has lost many followers in the last few years, especially in Germany. Jequirity is still used extensively in France, Belgium, and in other lands where the disease is endemic. The remedy should only be used in those cases where the granulations are unaccompanied with marked secretion, and it should be avoided

when there is any suppuration. It is especially indicated in pannus and sclerosing cloudings of the cornea. Jequirity should always be freshly prepared, and should be pulverized and applied to the palpebral conjunctiva with a camel's-hair brush just as we apply calomel. The lids should be well everted and approximated, so that the cornea is protected. The powder is allowed to remain in contact with the lids for two, three, or five minutes, and is then brushed with a cotton mop soaked in a boric acid solution. If the reaction is not sufficiently strong the application should be repeated. One pronounced attack of jequirity ophthalmia is more apt to do good than several weak ones, hence it is much better to get the desired reaction after the first application.

Production of Local Anesthesia in Ear.

Albert A. Gray (*British Medical Journal*, April 21, 1900) strongly recommends anilin oil with rectified spirit as a solvent for cocaine. He claims for this mixture in five- to ten-per-cent solution special advantages in producing a beneficial effect on suppuration, causing it to diminish or cease. This is probably due to the power of the oil in extracting the water from the tissue. This method of producing local anesthesia may also be employed on other mucous surfaces.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Lecturer on Dermatology, Detroit College of Medicine.

A Case of Nevus Cancer; Metastasis; Operation; Cure.

The following case of nevus cancer with metastasis, an operation, and a cure is from the report of a paper read by Dr. S. Pollitzer, of New York (*Journal of Cutaneous and Genito-Urinary Diseases*, August, 1900).

The patient was thirty years old when a small, slightly pigmented mole on the back about an inch to the left of the eighth dorsal vertebra began to ulcerate. During six years of treatment the ulcer never healed, and finally began to exceed the limits of the original mole. It was then excised, the skin stitched up, and the wound healed well, producing a linear scar. Six months later the skin in the neighborhood of the scar became raised, red, glistening over an irregular area about two inches in diameter, and broke down at two points, producing small ulcers. Soon after the patient consulted the writer. There was then, in addition to the condition described, a small, hard, round

tumor clearly below the skin, and an inch and a half from the edge of the red glistening patch.

The patch, including the scar and a large extent of healthy skin, was excised; the subcutaneous tumor was found within the substance of the trapezius muscle, and the latter was stripped up from its attachments to the spines of the ninth to twelfth dorsal vertebræ, and cut out to an extent that included the tumor. Microscopic examination showed the cutis throughout the red glistening area to be filled with round, oval, and irregular tracts of cancer cells, without connection with the surface epithelium. Examination of the tumor in the muscle showed it to be made up of large nests of cancer cells separated by dense masses of connective tissue which had replaced the muscle fibers.

Six years has elapsed since the operation, and the patient is entirely free from any sign of a recurrence.

Cases of nevus cancer are usually of such striking malignancy that the favorable result in this case, in which a metastatic depository had already occurred, makes it worthy of record.

Dermatitis Vesico-bullosa et Gangrenosa Mutilans.

At the last annual meeting of the American Dermatological Association (reported by the *Journal of Cutaneous and Genito-Urinary Diseases*, August, 1900) Dr. Grover W. Wende, of Buffalo, N. Y., reported two cases having a hysterotraumatic origin. One of these occurred in a female seventeen years of age, who had employed carbolic acid for the removal of a wart which was located upon the back of the hand. The result of this was a dermatitis which subsided in a few days, but later the vesicles and bullæ returned upon the forearm in the form of areas. Vesicles were afterwards discovered upon the second joint of the little finger, rapidly changing into a superficial gangrenous process, accompanied by darting pains. After one month mortification was completed, necessitating amputation of the two fingers. In one week's time the process again spread over the arm, the lesions being made up of broken and unbroken vesicles, bullæ, and numerous parchment-like plaques, varying in size from a split pea to a silver dollar. Later on only large gangrenous lesions appeared upon the body. The condition in some respects resembled neuritis ascendans. The affection first began over the ulnar nerve, anatomically following one nerve after another up the arm, until the anterior and posterior thoracic branches of the brachial plexus were affected by the process.

The second case originated with a girl who was highly neurotic; at times her body was completely anesthetic. The gangrene was preceded by a well-marked inflammatory disturbance, with vesicles.

The special interesting feature of the case was that it was confined to one region, namely, that of the right buttock. The affection lasted over four years, the patient having one or two attacks every year. The experiment of autosuggestion was tried upon the case with marked success. Vesicles formed within twenty-four hours, and gangrene appeared twelve hours later, although the process was less severe than the preceding ones. At the time of the experiment the general anesthesia had disappeared, but again returned after the experiment had been performed.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Subdural Injections in Labor.

Prof. E. Bumm, of Basel, has caused subdural injections of cocaine to be tried in his clinic as a local anesthetic during labor. Kreis, his assistant (*Centr. f. Gynäkol.*, July 14, 1900), reports upon six cases in which one centigramme of cocaine injected under the spinal meninges, between the fourth and fifth lumbar vertebræ, produced within five to ten minutes complete analgesia of the lower extremities extending to the sternocostal arch, without however impairing the tactile sense or suspending control of the will over muscular contraction. Uterine contraction, on the other hand, continued as before and was painless, the sensation amounting merely to a feeling of tension in the abdomen. Distention of the perineum, introduction of forceps, and birth of the head were painless. Voluntary bearing down proved as efficient as before the injection of cocaine. Efficiency of uterine contraction during the third stage remained unaffected; after-pains were felt only after two hours, and primary perineorrhaphy was done without pain.

Bumm and Kreis observed no serious complications after the injection, though, like Bier and Tuffier, they noted headaches and vomiting.

Masturbation and Amenorrhea.

Koblanck (Berl. Obst. and Gyn. Soc., in *Centr. f. Gyn.*, 1900, No. 31) failed to discover the usual etiologic factors in many cases of amenorrhea which came under his care. Accidental statements made by two patients awakened a suspicion of onanism, which was confirmed in several cases either by admissions made by the women themselves,

or indirectly by the return of menstruation after suppression of unnatural practices.

Koblanck further emphasizes the relationship of the nasal mucous membrane with the sexual function, and refers to the influence of local treatment of the nose upon dysmenorrhea.

The practice of masturbation has also been witnessed in unconscious eclamptic patients. Out of a running series of twenty women affected with eclampsia, nineteen admitted onanism during pregnancy.

Concerning menorrhagia, Koblanck confirms the views of Doderlein and others, with reference to the etiologic influence of imperfect sexual intercourse. Numerous patients — among whom four who by reason of so-called incoercible menorrhagia had already consented to complete hysterectomy — were cured in the absence of any gynecological treatment whatever merely by the reestablishment of physiological conjugal relations.

Danger of Vaginal Irrigation.

Theilhaber (*Münch. Med. Woch.*, June 12, 1900) recently read a paper with the above title before the Munich Gynecological Society. The writer has come to the following conclusions, after a careful analysis of many accidents following vaginal douching:

1. In sensitive women, too hot or too cold water may lead to shock, chill, nausea, etc.

2. If peritonitis is already present, the douche may cause an aggravation, especially if the intravaginal pressure is raised (which occurs if the ostium is unduly narrow, or if the fluid is injected under too much headway).

3. Very rarely the douching fluid has entered a vein in certain cases of cancer.

4. The majority of accidents, however, have been due to the entrance of the irrigating fluid into the patent os by reason of the engagement of the nozzle of the syringe, etc., in the latter aperture. The olive-shaped end of the cannula prevents the return flow of fluid, the uterus is dilated—as was demonstrated by Beuttner in 1897—and pain, with shock, emesis, etc., is produced.

5. There can hardly be a doubt that the irrigation fluid may at times penetrate the tubes and enter the peritoneal cavity. The state of affairs then becomes the same as that which follows the same accident in connection with intra-uterine douching. It can readily happen that infectious particles are carried up from the vagina or uterus into the peritoneal cavity; especially is this true of gonorrhea.

THE MEDICAL AGE

VOL. XVIII. DETROIT, OCTOBER 10, 1900. No. 19.

ORIGINAL CONTRIBUTIONS.

FORMALDEHYDE AS A MILK PRESERVATIVE.

BY A. G. YOUNG, M.D.,
Secretary State Board of Health, Augusta, Me.

A local newspaper discussion of this subject led me to address a circular to the secretaries of nearly all the State boards of health, to the departments of health of fifty-six of our larger American cities, and to every agricultural experiment station in the country. The letter contained the following questions:

1. What is your opinion or that of your board regarding the use, by dairymen and milk dealers, of formaldehyde as a preservative of milk?

2. Do you believe that, used as a preservative, formaldehyde impairs, or has a tendency to impair, the nutritive value of milk?

3. Do you think that, when thus used in milk, formaldehyde has a tendency to interfere with the digestive processes?

4. Kindly let me know whether your board is taking any action or adopting measures to prevent the use of formaldehyde as a preservative of milk, and if so, what action.

The last question was omitted in the letter sent to the experiment stations.

Tabulating the answers to the first question, or the opinions as to whether it is right for dairymen to add formaldehyde as a preservative to the milk which they sell, from fifteen boards a distinct negative was received, from one an inclination to an affirmative, and from seven there was no reply to this question.

Of the city boards, twenty-four are opposed to the use of the agent in question as a preservative, three did not answer, and one gave an equivocal answer.

From the experiment stations thirty answers were positively against the use of formaldehyde in milk, and none countenanced its use; seven letters did not answer this question.

Of all the officials heard from, State, municipal, and experiment station, only one answer indicated that the writer deems it right or expedient to encourage or to allow dairymen to use formaldehyde in milk. This expression of opinion is of interest and of some value as an indication of the sentiment of public health officers and the experiment stations on this question. Many of the letters contain strong and positive statements of the convictions of the writers that formaldehyde should not be added to milk, and why it should not. That these opinions come from men in the best positions to answer this question understandingly, and that they represent both sides of the question, the economic as well as the public health side of it, should add weight to what they say.

As to the action of formaldehyde on the nutritive value of milk, or its influence on the digestive and assimilative processes, or what effect its prolonged ingestion, even in small quantities, has upon the excretory organs, our knowledge is incomplete, though experimental work and clinical observation have put up a few finger-boards.

Experience of late years in laboratory and anatomical work has abundantly shown that formaldehyde in solution or as a free gas hardens albuminous matter and converts it into a substance with a leathery appearance. The object of some European experiments has been to determine whether solutions of formaldehyde might not be used for the preservation of meat and fish; but these articles have been injured and rendered unfit to use as food products. Gottstein[1] determined that such food products hardened by the use of formaldehyde cannot again be softened by boiling. Though not proving the fact conclusively, we would naturally infer that used in milk even in small quantities the tendency at least of its action on the proteids would be in the same direction.

One of the bulletins[2] of the Cornell University Agricultural Experiment Station says: "The behavior in the Babcock test of milk which had been preserved by formalin shows that its composition is in some way affected. Ordinarily the curd of milk is dissolved by the sulphuric acid that is used in the test. Where formalin is used the curd often fails to dissolve and becomes a compact mass. If this preservative can so alter milk that sulphuric acid may fail to dissolve its curd, is it not at least probable that the action of the gastric juice in the stomach may be rendered less effective?"

The investigations of T. H. Weigel and S. Merkel[3] showed them that the casein of milk which has been treated with formalin should

never be added to milk intended for children. They also state distinctly that formalin interferes with the digestion of milk.

Bliss and Novy conclude from an extensive study of this problem that the casein of milk, on contact with formaldehyde, undergoes very rapid alteration, and is, as a result, not coagulated by rennet, or but very slowly. Such altered casein, like similar fibrin, is not readily digested by the proteolytic ferments. These experimenters found that fibrin is altered by formaldehyde and is less easily digested by pepsin and by trypsin. They found also that trypsin is altered to such an extent by contact with formaldehyde that it does not digest fibrin at all, or very slowly.[4]

As bearing on the question of toxic possibilities of formaldehyde, the following observations may be introduced:

In the experience of a large number of experimenters and public health officers the inhalation of formaldehyde in ordinary doses, or in the case of animals in large doses, has appeared to be harmless in its results, or productive of no serious harm. This, however, has not uniformly been the case. Dr. Charles Harrington,[5] speaking of the results produced by formaldehyde gas on two rabbits used in his experiments, says that they were sufficiently certain to demonstrate the falsity of the theory that formaldehyde exerts no deleterious action on higher organisms, and to render further experiments on his part in this direction unnecessary. Dr. Brough,[6] referring to the results of his investigations for the Municipal Board of Health of Boston, says: "Dogs and cats which have been left in rooms were found killed."

Mosse and Paoletti stated that "intravascular injection profoundly modifies the blood so that hemoglobin passes out from the corpuscles into the plasma. The blood-vessels contract when in contact with formaldehyde, their walls being altered, and their corpuscular elements escaping into the tissues. These points were ascertained by experiments on the renal circulation." A. H. Pilliet states that "to cause fatal results it must be given subcutaneously in doses of 0.25 gramme per kilogramme of body weight. The lesions consisted principally of intense congestion, with evidence of cellular irritation and vacuolization, but no necrosis. These conditions were noted generally in the stomach, intestines, kidney, liver, spleen, and suprarenal corpuscles."[7]

Graziani[8] injected daily into a rabbit half a grain of formalin diluted. After eighteen days the animal died, having lost 183 grammes in weight. There was no albumin in the urine, but on section there were present hyperemia of liver and kidneys, and a little swelling of the epithelium of the uriniferous tubules. Another rabbit, after receiving from ten to fifteen drops daily, died in ten days. There

was hyperemia of the stomach and liver and small erosions of the former.

As the experiments of Rideal and Faulerton on a small number of adult animals gave no positive results, Dr. Annett[9] arranged a large number of experiments on young kittens. The results were that the younger the animals the more susceptible they proved to the action of formalin. Compared with the control animals, in Group A, which had one part of formalin to 50,000 parts of milk, the formalin retarded the nutrition of the animals, as indicated by their rate of increase in weight, to the extent of about twenty-nine per cent; in Group B, with one in 25,000 of formalin, nearly forty per cent; and in Group C, with one in 12,500, about sixty-nine per cent. From his experiments with formaldehyde and boric acid, he is forced to conclude that these chemicals, used as preservatives of milk, are very injurious to the health of the consumer, and particularly so to the health of young infants.

Dr. Charles Rock, resident physician to the Indiana School for Feeble-minded Youth, reports that on the farm connected with the school a man was treating seed potatoes with four-per-cent solution of formaldehyde. During this man's temporary absence, one of the inmates, a "low-grade imbecile," twenty-six years old, strong and healthy, drank from an ounce to three ounces of the solution. He immediately complained of pain in the stomach and began to vomit. The vomited matter was stained with blood. Large quantities of albumen water were given at once, and he had but little difficulty in swallowing it. Free vomiting was produced with a tenth of a grain of apomorphine given subcutaneously. At the end of two hours the man seemed but little the worse for his rash act, although he was somewhat weak and complained of slight pain in the stomach. The administration of albuminous drinks was continued, and he seemed to improve until the sixteenth hour, when his pulse began to flag. It continued to grow weak and rose to 92 in frequency, in spite of repeated large doses of strychnine given subcutaneously, together with one dose of nitroglycerin and several doses of sparteine by the mouth. At the twenty-ninth hour his respiration was 40, he was getting restless, and his heart was failing. Seventeen ounces of normal saline solution was injected under the skin, and two hours later sixteen ounces was thrown into a vein, but he presently died. During the last hour of his life there was occasional slight cyanosis.

At the post-mortem examination the upper and middle thirds of the esophagus showed slight signs of inflammation. The stomach contained four ounces of dark fluid free from formalin. Its walls were in some places more than an inch and a half thick and very

edematous. The cardiac end was very red and highly inflamed. The remainder of the organ was necrotic, dark, and tough, and cut like old leather. In the duodenum there was an inflamed area confined chiefly to the valvulæ conniventes.[10]

As bearing on the other side of the question, the experience of Dr. J. N. Hurty, secretary of the State Board of Health of Indiana, may be cited. He says: "I have found that five to ten drops of the forty-per-cent solution of formaldehyde will preserve a gallon of milk quite satisfactorily, and I do not believe that such an amount of the agent can in any way detract from nutritive value. Neither do I believe it will disturb the digestion. I have conducted some physiological experiments which seem to abundantly support the belief expressed. For instance, I have myself for five months daily taken as lunch a bowl of bread and milk, and have placed in said food ten drops of forty-per-cent formaldehyde. I cannot by the closest scrutiny discover any ill effect, but on the contrary am inclined to believe that the milk agrees with me better because of the chemical. I have also prescribed a drop of formaldehyde in each bottle of milk in the case of some infants suffering from intestinal disorders, and my observations were to the effect that good resulted." He also states, through the columns of a pharmaceutical journal,[11] that he took the formaldehyde in milk as a preventive of the fermentation which caused acid indigestion. Thus far there is no adverse criticism from the hygienic point of view; that is the therapeutic side of the question. But when from such experiments the conclusion is drawn that it would be a good thing to allow the dairymen to use it—that is an entirely different matter.

Aside from the findings of experimental work and clinical observation, there are other considerations which should have due weight when the question comes up whether one shall encourage the general use of formaldehyde or any other chemical preservative in milk.

1. It is a question of encouraging and abetting the addition of potent chemical to a food supply, by persons not all of whom are intelligent and conscientious. If allowed to use it at all, unskilled persons will often add it in unreasonable quantities, granting that any quantity is reasonable and legitimate; and sometimes after the dairyman has added it, the middleman, with milk left on his hands, will pour in more of the preservative to keep it for the next day's sale. At one time some of the foreign adulterators added as much as one gramme per liter of salicylic acid, but after restrictive legislation was introduced they would be content if they might use one-twentieth of that quantity. In a paper read this year by Dr. Alfred Hill, medical officer of health, Birmingham, England, he says that in five per

cent of 1360 samples of milk examined by him, boric acid was found in quantities varying from 130 grains per gallon to three grains or less. When the former case came before the magistrates the defendant admitted that he had added a *solid* preservative to the milk.[12]

These instances are illustrative of the statement of Professor Soule, of the Experiment Station of Tennessee: "In the greatest number of cases these chemicals would be used by inexperienced and unscientific people who do not appreciate the importance of using just the right amount, hence the use of these preservatives indiscriminately is very dangerous."

2. In the absence of legal prohibition, preservatives enable slovenly and dishonest persons to put upon the market dirty milk, and milk in which the fermentative changes have gone so far before the antiseptic is added that they are unfit as food, and dangerous, especially to infants. Preservatives should not be an alternative for cleanliness. Professor Hills, director of the Vermont Experiment Station, says: "Certain it is that the use of any material of this kind tends to discourage rather than to encourage the making of milk under sanitary conditions. I strenuously oppose any method for the preservation of milk which will tend to make dirty milk more readily kept."

Dr. Frear, vice-director and chemist to the Experiment Station of Pennsylvania, put the matter as follows: "Men coming to feel that they may rely upon chemical antiseptics grow neglectful of conditions of cleanliness which are essential to the production of a healthful article of food. On this second ground of policy, therefore, I object to the general use of any antiseptic."

3. There is no real need of using chemical preservatives in milk. Under unfavorable or ordinary dairy methods, milk contains from a few to many million bacteria to the cubic centimeter, and the quantity of dirt is correspondingly great; but with the more careful and cleanly conditions under which some dairymen now have their milking done and the milk handled, the number of germs is reduced to a few hundred, and without chemical preservatives or Pasteurization its keeping quality is considerably superior to that of ordinary milk.

4. When one man, or a few of them, take antisepticized milk for a while and come to the conclusion that the continuous milk supply of the multitude, invalids, babies, and all, may safely be doctored with formaldehyde, their conclusions should be swallowed with a pinch of chloride of sodium. Von Pettenkofer and others proved that not every person who swallows cholera spirilla develops a malignant or a typical attack of cholera. They proved nothing else. We should remember that we have to reckon with idiosyncrasies and with personal dispositions and immunities in toxicologic as well as in epidermiologic matters.

5. In the earlier years of their use boric acid and salicylic acid were deemed innocuous. Now it is known that, when continuously administered, the by-effects are often undesirable and dangerous. Even boric acid, less dangerous than salicylic acid, is far from being entirely safe when freely used in surgical practice or as a food adulterant. Prof. Dixon Mann, of England, reports as follows: "I have seen several cases in which a purpuric eruption, with nausea, loss of appetite, and depression, followed the dressing of open wounds with boric ointment. . . . I can remember two cases in which thrush in infants was treated with honey and borax, and the application continued long after the aphthæ had disappeared. Nutrition was so much impaired as to cause great emaciation, with intestinal irritation and diarrhea. . . . I am strongly of opinion that the most stringent restrictions are needed in respect of milk, as being the food of infants and young children, whose nutrition would be seriously impaired by the prolonged ingestion of boric acid, or its compounds, even in small amount." Professor Leach, of Manchester, has expressed the following opinion: "It appears to me that many patients can take either boric acid or borax for a long time in very large doses with impunity, but in some people the unpleasant results are produced by comparatively small quantities, and it is quite possible that serious harm might in these cases follow its ingestion in the quantities in which it is used in the preservation of food. There can be no doubt that it should not be used in the preservation of milk."[13] Concerning formaldehyde it is probable that the opinion of persons who now look upon the prolonged use of small doses of formaldehyde as entirely innocuous may pass through a transitional stage similar to that which professional opinion has lately experienced in regard to the use of the older preservatives.

6. One of my correspondents, though not advocating the use of formaldehyde as a milk preservative, is under the impression that it speedily evaporates after it is added to it. Those, however, who have had much experience with formaldehyde in the disinfection of clothing, or in subjecting various kinds of organic matter to its action, would be inclined to believe that this correspondent is mistaken. Formaldehyde appears to enter into some kind of combination with fabrics and with many other kinds of organic matter, so that it is not easily dissipated. The recommendation has been made to heat milk to which formaldehyde has been added to drive off the chemical; but Pasteurization or sterilization in the first place would be the preferable alternative, if heat is to be applied at all. In connection with infant feeding we hear something of the devitalizing influence of heat on the milk, but it is questionable whether the influence of formalde-

hyde in this direction is not the greater of the two evils, irrespective of the influence of formaldehyde on the digestive and other vital processes. Prof. S. M. Babcock, chief chemist of the Experiment Station of the University of Wisconsin, writes: "Formaldehyde not only renders the proteids of milk less digestible, but, when added in sufficient quantities to suppress bacterial growth, destroys the proteolytic enzymes contained in the milk."

L. M. Tolman, chemist to the Board of Health of Oakland, California, says: "The action of formalin in milk increases the total solids, probably in two ways, by hydrolysis of the sugar, and by formation of polymerids of formaldehyde which are non-volatile; therefore the argument that formalin is a good preservative, and suitable to preserve foods because it can be driven from the foods by warming or other means, may not be true."

7. One correspondent suggested that the use of formaldehyde might, perhaps, be allowed under a law establishing a legal maximum. That, it seems to me, would be very nearly equivalent to a complete surrender to the adulterators. It would, further, entail upon the State a costly inspection service which but few of our commonwealths would support. In this connection the words of Dr. H. W. Hill, director of the laboratory of the Department of Health of Boston, are of interest: "Until the exact amount which may be preservative without being in any way harmful is determined (if any such amount there be) official commendation should, I think, be withheld. Moreover, the authorities are agreed that the qualitative tests are so delicate as to allow the recognition of one part of formalin in 500,000. But they are also agreed that *quantitative* tests are unreliable. It would seem, then, that it is at present unwise to sanction the addition by untrained or irresponsible parties of formalin, even in small amounts, when the actual amount added cannot be determined by analytical tests. Such sanction permits the addition of a possibly dangerous substance, while taking out of the hands of the authorities the power to determine in any given case how much has been added."

Conclusions.—The results of my examination of all the available printed and other reports regarding the action of formaldehyde seem to me to justify and require the following conclusions: That used as a preservative it *tends* at least to impair the nutritive value of milk; that its tendency is also to interfere with the digestive processes—in either case it is only a question of dosage, and the limit of safety is difficult to determine; that, though the inhalation of formaldehyde gas is much less dangerous than the breathing of the other gaseous agents much used as disinfectants, the results of tests upon animals and one case of accidental poisoning of a human being indicate that

formaldehyde taken into the digestive system may produce dangerous and even fatal results; that it would be unwise and unsafe to encourage or to suffer the use of formaldehyde in the public milk supply, even under any possible restrictive regulations; that in every State, as there are now in many, there should be a law prohibiting with effective penalties the use in milk of any chemical preservative whatsoever.

These, at present, are the only rational and safe conclusions. If new light arises in the future we can take our bearings anew, and correct our course if need be.

BIBLIOGRAPHY.

1. *Deutsche Med. Woch.*, xxii, 797, 1896.
2. Bulletin 118, July, 1897.
3. Forschungsber, ueber Lebensmittel und ihre Begiehungen zur Hygiene, 1895, 91 to 94. Quoted by Dr. H. J. Wheeler, Chemist, R. I. Experiment Station.
4. *Journal of Experimental Medicine*, iv, 47, 1899.
5. *American Journal of the Medical Sciences*, cxv, 69, 1898.
6. Formaldehyde Gas as a Disinfectant, p. 14, 1898.
7. *Merck's Archives*, vol. i, 10.
8. *La Riforma Med.; Centr. für Bak.*, xxv, 683, 1899.
9. *Lancet*, ii, 1899, 1284.
10. *New York Medical Journal*, lxx, 309, 1899.
11. *American Druggist; Sanitarian*, xxxix, 318, 1897.
12. *Public Health*, xi, 529, 1899.
13. *Public Health*, xi, 529, 1899.

NEURASTHENIA; WITH REPORT OF CASES.

BY F. S. SMITH, M.D., NEVADA, IOWA.

This term, neurasthenia, has come into very general use during the past few years, both among physicians and the laity. It has been called the great American disease, and covers a great group of symptoms characterized by nerve incoordination, formerly known as spinal irritation, the neurotic diathesis, nervous prostration, etc.

The term embraces those cases of nerve disease known by their symptoms only, but whose anatomical and pathological changes are unknown, where there is a lack of balance of the different parts of the nervous system.

It is true that neurasthenia may be secondary to, and entirely dependent on, certain localized pathological changes in other parts of the body, as uterine or prostatic diseases, refractive troubles, rectal irritation, etc.; but it is also true, so far as our present diagnostic skill is perfected, that it is surely at times a primary disease or weakness; and even if secondary to other troubles, there is a preexisting functional weakness.

The lines between hysteria, melancholia, morbid fears, monomanias, and other abnormal mental states are in certain cases very freely drawn. It is said that a hysterical person is always neurasthenic, but I do not think the converse proposition is true, that a neurasthenic person is always hysterical.

The refinements of diagnostic skill may in the future enable us to always differentiate neurasthenia from hysteria, insanity, and the other neuroses, but at present some confusion surely exists in our minds. While we cannot diagnose any gross lesions, still there is a departure from health, and the patient is unequal to the ordinary tasks of life.

While there are many types of this disease, yet they so run together that it seems impossible to separate and classify them. Some have muscular weakness, and sense of fatigue or positive pain; others have the mental symptoms predominating, while the strength is good.

Generally speaking the term "irritable weakness" applies well to these cases. They seem to have lost their grip on life, have lost the buoyancy necessary to meet the requirements of life's duties.

The subjects of neurasthenia are usually talented, versatile, active both mentally and physically, very sensitive, and emotional; but they lack the vigor and ruggedness to long endure the hardships necessary in the struggle for success in life. They are easily discouraged. Slight obstacles are magnified to become mountains. They are distrustful, they cultivate a feeling of loneliness, think friends have abandoned them, and some of the long line of morbid fears take possession of them: fear to meet crowds, or of being alone; fear to ride in a buggy, or on cars; fear of open spaces, or of falling walls, etc.

The pains and aches of these patients will tax the soul of the attending physician to the utmost—pains in the back, muscles, head, heart, and neuralgias of all sorts. It may be dyspepsia simulating catarrh of the stomach; constipation or watery diarrhea, coming on suddenly from some emotion. There may be anesthesia or hyperesthesia, formication, or sense of heat of certain parts, palpitation of the heart, nervous cough, eye trouble, or tinnitus aurium. Insomnia may be either real or imaginary. Among middle-aged men sexual aberrations are very common.

As the subjects of neurasthenia are usually very active and mercurial, many of them have committed sexual excesses some time in life, and they will imagine this to be the cause of their trouble. They become fearful that they have lost their power in this direction, and this fear acts on their mind to the extent that they make themselves believe they are, and finally become, impotent, or have premature ejaculations; and the sexual act leaves them exhausted. This sense of sexual weakness drives many patients to consult their physician.

As indicated above, the etiology of neurasthenia is obscure. It truly belongs to the long list of neuroses, and may resemble, in some particulars, nearly any of them.

There is, no doubt, a hereditary tendency to nervous instability; although for years the person may properly perform the ordinary duties of life, until some great exposure, exertion, responsibility, or mental anxiety comes on, and he finds himself not equal to the demand.

In our push and hurry to crowd children through school, the girls into society, and the boys into business or professional life, we have made this the great American disease. The greed for wealth and power, irregular hours, stimulation by alcohol, tea, coffee, tobacco, opium, and other drug habits, give us a share of patients. It often comes on as a sequel to la grippe. Many patients date the beginning of their trouble to the time "when I had the grippe." It is the great epoch in their lives. Of course, there was a preexisting weakness, and the grippe only brought out the latent trouble, as it always seems to attack the point of least resistance.

Times of great financial depression always bring a crop of neurasthenic patients. Our papers daily give accounts of bank presidents and cashiers who have gone wrong, and are suffering from nervous prostration, and times of great monetary stringency seem to affect the nerves of all to a greater or less degree.

As the etiology of this condition is not clearly known, there are therefore no specific lines of treatment, but we should find and correct every physical ailment that can be demonstrated. Test for errors of refraction, examine uterus and ovaries in the female, and the prostate in the male. Examine for hemorrhoids, fissures, or rectal ulcers. See to digestion and defecation. Examine urine for any trouble of kidneys or bladder. Probe into the past life, hunt for history of sexual or other excesses. See to the family relations and cares, and if there is trouble try to have it corrected. Find if financial matters worry, and try to have friends help, if needed.

And finally, I believe that few neurasthenic persons who have acquired this disease under certain conditions and environments ever entirely recover, if left exposed to the same surroundings. There must be a breaking away from the old scenes and associations surrounding them when they gave up the struggle. Everything must be broken and changed. Many business and professional men make this discovery themselves, and each year take a vacation and thus recuperate and keep in working order, who would otherwise become confirmed neurasthenics. This one thing I consider above all others necessary to speedy recovery. After you have corrected all the ailments you

can find, send your patient away from home. He will demur, find a thousand excuses, declare he cannot meet strangers, that he will worry himself to death if forced to leave home; he has no resolution or confidence in himself. But insist on a change of location. If nothing else can be done, send him out in the country. Stop all medicine, unless some simple tonic. Forbid him to discuss his ailments with any one, but try to forget them. Let him hunt, fish, row, ride horseback or bicycle. Put him on his honor not to allow the people where he stops to know he is an invalid. Instruct him if asked in regard to his health to declare he is perfectly well, and then change the topic.

If the patient is a lady, or one too weak to go through the above exercises, then have a change of scenery, and calisthenics, indoor exercise, and massage.

A cold sponge bath every morning is of great importance, but the patient must wait on himself in this. Refuse to allow him to be waited upon. Many of these patients have kind friends to anticipate their every want, and their energies and resolution being much weakened, they easily fall into indolent, listless habits. Forbid this, make them exert themselves, refuse to consider them as invalids. Tell them they are well; they have been sick, but are now convalescent, and only need time and proper exertion to wholly regain their strength. Be firm as a physician; enforce your orders; win their confidence; guide the mind away from themselves, for their *ego* is wonderfully developed.

I will not stop here to discuss the use of electricity, hypnotism, and the rest cure. They all have their use in properly selected cases, and are of great and lasting benefit. Neither will I have time to mention special drugs, but will at once proceed to give a short history of three cases in practice that seem to me to be of special interest:

Case 1.—Mr. T——, aged sixty, lawyer; habits perfect; good family history, although his father is said to have been very nervous. Patient has always been active and strong, mentally and physically; given to periods of intense activity, alternating with spells of slothful indolence. He is well nourished and looks younger than his real age.

First called February 8, 1896. Found him without any definite symptoms pointing to any special disease. He had just passed through one of his periods of prolonged intense application as county attorney, and had met with some very bitter opposition in some of his prosecutions. He was sleepless; some headache; irregular heart action; variable, capricious appetite; indigestion and constipation. He was very much depressed and melancholy, and at one time I feared he was becoming insane. His memory was very defective;

could not recall words wanted; called things by wrong names; would stop in the middle of a sentence to struggle for a word that had escaped his memory. Spells of tetanic jerking of arms, legs, and head came on later. Complained of points of burning heat, anesthesia and hyperesthesia of surface. Morbid fears and suspicions took possession of his mind. He would not willingly meet old friends; thought they only called to spy and observe his weakness. When able to, and fairly driven to take outdoor exercise, he would walk on back streets to avoid meeting people.

Language and time would fail to tell all this patient's vagaries and notions, his ever-changing symptoms, aches, and pains.

From February 8, 1896, to August 1, 1896, I worried with this case. I exhausted my materia medica: bromides of all sorts, cannabis indica, hyoscyamus, phosphorus, arsenic, strychnine, iron, sulphonal, trional, etc. For a while he could not sleep; then he slept all the time. He was cold, then was bothered with areas of burning heat. His head and then his legs would ache. He came nearer having all the symptoms of neurasthenia than any patient I have ever met. He never seemed to rally and become permanently better until he was forced from home to go on a three months' visit. He went then only because we wore out and overpowered his opposition. He went protesting that it would kill him. But within a few weeks he was out hunting and fishing. He took no medicine and was not considered an invalid. In three months he came back apparently as well as ever. I meet him daily, but remembering my injunctions as to discussing his sickness, I have never spoken to him in regard to his health, but he seems as well and cheerful as before his sickness.

Case 2.—Mr. X——, aged thirty-five; merchant; married; good German ancestry; a small, active, wiry man; a great athlete all his life; always cheerful and bright; a vivacious, voluble talker. He is of a typical nervous temperament. Has been given nearly all his life to sexual excesses. A moderate beer and wine drinker.

First began to complain a year ago of itching of anus and scrotum; could not sleep or attend to his business; became very gloomy and morose. He haunted my office for months. Everything I gave him seemed to help for a while, and then a relapse. Finally discouraged, he quietly left town, and I heard from him in a Chicago hospital undergoing an operation on the rectum, though I had never been able to find any lesions excepting where he had scratched and torn himself around the anus. He came back in a few weeks, seemingly all right, and enthusiastic over his surgical operation, although he never knew just what was done.

All went well for a month or two, when he came back to me,

nervous and broken down; almost in a hysterical condition; he could not sleep; had spells of crying; was easily worried and irritated over little business matters; had lost his appetite, and was failing in strength; had pains in the back of head, and roaring noises in his ears. He was nearly crazy over sexual weakness and impotency.

I explained his case to him as one purely nervous in character, prohibited all attempts at sexual indulgence, and put him on tonics, as in Case 1. He has been on treatment for six months; has had many ups and downs; every little business worry would prostrate him and again plunge him into a week of gloom. But he is gradually growing better; the spells of nervous collapse are less frequent; the roaring in the head has left him; he sleeps better and is gaining in weight and strength. I cannot arrange for him to leave home, but look for a restoration to health in a few months.

Case 3 is introduced simply to show one phase of this weakness. Mr. W——, aged twenty-six; married; a minister; a large man, six feet three inches in height; general health and ancestry good; he is of an emotional, sympathetic nature; he has had but one sick spell, and that several years ago, when a student. I have no particulars of this sickness, but he speaks of it as a nervous prostration.

The only active symptom that remains is the tendency to watery mucous diarrheal discharges coming on under any great excitement or emotion. His wife had to have local uterine treatment, and invariably he would have to leave for the closet whenever he attempted to stay in the operating-room. If he stayed in the front office he had no trouble. During times of revival meetings he is bothered in this way. His bowels will have been regular and normal for weeks, until some sudden emotion seizes him, when almost instantly he has to go to stool; perhaps only to pass some slimy mucus. The passages following this again become normal, and no such discharges again until under some excitement.

This may go on for years without a nervous breakdown; but he is in danger all the time. The nervous movements, twitching of eyes and muscles of face, his jerky, quickly-spoken words, all tell of a nervous instability.

In conclusion, I believe that our studies on this condition should be directed to the great sympathetic system of nerves. From my studies and cases I am more and more led to think that the whole trouble may be found to be a want of equilibrium between the sympathetic and the general nervous systems.

PROFESSIONAL EXPERIENCE.

The Successful Practitioner who is also Something of a Philosopher was standing on the main deck of the steamship *Leviathan*, as she was entering quarantine after a swift voyage across the sea. The friend and companion of his vacation—the Square-minded Business Man—was by his side.

"If it may so be said of men like you and I, already 'fixed' in life," began the Practitioner, after a silence of some minutes, "it is at such times as this that we stand upon the threshold of new personal careers. As at no time in the midst of the working year, the world opens up anew before us. Perhaps it is a creation of the fancy; if so, I cheerfully give way for the time to it. A special interest attaches to one's return, fresh and enthusiastic, to his chosen activities. And it is a tribute to the wide range of modern living that we can, as it were, change now and then from one world to another. Just at this time we turn our backs upon things as they seem, and settle ourselves down once again to things as they are."

"To touch the world at many points; to come into close relationships and actual sympathies with many types of people; to think, feel, and act on a broad-gauge plan—these are the best opportunities for growth," answered the Business Man. "One kind of experience attends us in our daily rounds; another kind follows us abroad. Each we see better with the help of the other. It is not only true that a man's greatest good fortune is to have the opportunity of giving out freely and powerfully all the force that is in himself, but it is also true that almost equally good fortune may be to that individual who has the opportunity of receiving the benefits of a wide, deep, and rich experience. There is unlimited worth in an ample personal radius when its possessor knows how to use it aright; and the best personal radius in the world is that which strikes through the greatest number of human experiences, and yet keeps its center in the very heart and life of the individual."

"In my opinion, it is the part of memory to retain a summing-up of experience, so that as one goes through life he may learn certain needful things," continued the Practitioner. "Unless one does this, his own usefulness is greatly impaired. Exalted self-reliance cannot fill the breach. In order to do one thing well, many other things must be mastered in the course of professional progress. Thus are working tools prepared, and it is through their use that other and higher acquisitions are made. There is no real advancement until one is skilled in the use of whatever is required in or accessory to his

trade. Like the mechanic, the surgeon must have the mastery of his instruments before he can work with them, and no substitution or evasion will answer his purpose.

"Professional life imposes certain conditions upon him who would pursue it. There is demanded, among other things, determinate standing, positive action, and specific results. Facts, observations, occurrences, when, where, how, and why, with all the forces active and passive, residing in the inner and outer life, have their intrinsic values. These are to be handled, separated, and traced in light or heavy lines through the various units composing humanity. The specialist must master a thousand details before his preparation is complete. Tables and measures are merely symbols for what he must remember and employ at every step; handbooks and manuals are needed all the time. He is the cataloguer of everything that concerns, directly or indirectly, his part in life. A specialized nomenclature is called into his service. Look to the botanies, geologies, chemistries, mineralogies, physiologies, and the biologies—see what language must do for professional progress. What a load the alphabet is made to carry! Back of all else is tremendous personal industry. One must reach knowledge and experience through aspiration and labor, and by their constant use be made strong. Wisdom is the ripened fruit of this process. That which is drawn from experience is quite another thing from that which is reached by theory and speculation."

"Individual experience is a great teacher," interposed the Business Man; "but no matter how deep and thorough it may be, it has limitations prescribed by nature. And the lives of the most forceful and resourceful of us would be confined within narrow boundaries if they were always shut up within the limits of individual contact with personalities and things. A man may learn much from his own contact with his time and race, but one of his most important possibilities is the development of the faculty of appropriating the results of the nearer approach of others to different times and races. And one of the finer qualities of a rich experience is the natural quickening of the imagination and understanding to divine that which is hidden in the thoughts and works of others—past and present. The man of broad life must not only live deeply and intelligently in his own experience, but he should also break away from its limitations, and thus escape the tendency to substitute a part of life, distinctly seen, for the whole panorama of life more or less vaguely discerned. The great physician, like the great writer, must first make his own nature rich in its own development, and powerful in its harmony of aim and force. Then he must also make his nature sensitive, sympathetic, and clairvoyant in its relations to others. To be self-centered, and yet to be able to pass

entirely out of one's self into the thoughts, impulses, emotions, and sufferings of others, involves a harmonizing of opposing tendencies which is in itself the highest attainment."

"And yet," concluded the Practitioner, "it is precisely this delicate poise which men of the highest power secure, and which gives to a person of imaginative faculty range, strength, and sanity of view. To see, feel, think, and act strongly and intelligently in our individual trade or profession gives us first-hand relations to the world, and the best obtainable knowledge of it. But to pass beyond the limits of this necessarily narrow circle—which we touch with our senses—into the larger spheres in which others move, not only widens our knowledge, but vastly increases our powers as well. It matters less the manner of approach than the spirit of it. And then, too, one of the measures of greatness is the ability to pass through individual into associational or racial experience. Those who hold favorable places in the larger life might justify their positions—were that necessary—by their universality; that is to say, by the range of their knowledge of life as revealed in the experiences of others. Thus the visions of the poets and philosophers, the observations of travelers, and the triumphs of scientists, become through them the heritage of all who are qualified to partake of them.

"No one of true understanding can glean aught of value anywhere without passing beyond the boundaries of his own experiences into others which broaden and quicken his spirit. In such instances you meet life at new points and pass through emotions which could never have been stirred within you by the happenings of your own life, no matter how rich and varied they may have been. To possess the knowledge of other experiences, widely different from but equally valuable with our own, is to push back the horizons of individual experience and secure further development and enrichment. Whoever will pursue this process far enough will gather to himself much of the fruits of all-life."

A HYGIENIC exhibition intended for the training of mothers was recently held in Vienna. The chief feature of the exhibition was the display of all that is necessary to the care and nursing of little children from the earliest age, so as to give young mothers a sort of object-lesson on the proper treatment of their little ones. It was intended that the exhibition of new-born babes in incubators should form part of the show, but the authorities forbade this on the reasonable ground that there are objections to a public show being made of children requiring the extremest quiet and attention.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

FORMALDEHYDE IN MILK.

In another column will be found a contribution by Dr. A. G. Young, secretary of the State Board of Health of Augusta, Maine, on formaldehyde as a preservative of milk. The discussion of this subject in the newspapers has been a prominent feature of the summer season, and the conviction of a large number of milk venders for using this substance in milk seems to be likely to follow as a result of newspaper agitation. Dr. Young has sought the advice of twenty-four city boards of health and thirty experiment stations, and the answers he received from these were positively against the use of formaldehyde in milk. The reason of this opposition seems to be based either upon the action of formaldehyde on the nutritive value of milk, or else its influence on the digestive and assimilative processes. That it alters the nutritive value of milk is to be inferred from the following fact, vouched for by one of the Cornell University agricultural experiment stations: "The behavior in the Babcock test of milk which has been preserved by formalin shows that its composition is in some way affected. Ordinarily the curd of the milk is dissolved by the sulphuric acid that is used in the test. Where formalin is used the curd often fails to dissolve, and becomes a compact mass. If this preservative can so alter milk that sulphuric acid may fail to dissolve its curd, is it not at least probable that the action of the gastric juice in the stomach may be rendered less effective?"

Weigel and Merkel have shown that the casein of milk which has been treated with formalin should never be added to milk intended for children.

Bliss and Novy consider that the casein of milk on contact with formaldehyde undergoes a very rapid alteration, and is as a result not coagulated by rennet, or but very slowly. These experimenters also found that fibrin is altered by formaldehyde and is less easily digested by pepsin and trypsin.

The toxic influences of formaldehyde are, of course, without dispute. Intravascular injection modifies the blood so that hemoglobin passes out from the corpuscles into the plasma. The blood-vessels contract when in contact with formaldehyde, the walls being altered and their corpuscular elements escaping into the tissues. To cause fatal results, it must be given subcutaneously in doses of 0.25 gramme per kilogramme of body weight.

Aside from the findings of experimental work, there comes up, of course, the much larger question as to whether unskilled persons shall be allowed to add preservatives to milk. The use of salicylic acid and boric acid has led to even those comparatively harmless substances being used in milk to an extent which was positively harmful. The danger of adding chemicals by inexperienced and unscientific people, who do not appreciate the importance of using just the right amount, is, of course, a considerable one.

Another important fact is that the use of these preservatives by slovenly and dishonest persons goes far to render those precautions needless upon which the value of milk as a food depends. In fact, they discourage rather than encourage the making of milk under sanitary conditions. At the present day there is no real need for using chemical preservatives in milk. Under favorable dairy methods milk contains but few bacteria, and the dangers of milk can be reduced to a minimum without this addition of chemical preservatives.

If we were to allow the use of formaldehyde under legal restrictions, it would be somewhat of a concession to the adulterators, and it would entail upon the State a costly inspection service which it would be difficult to support. It would seem to be, therefore, unwise at present to sanction the addition of formaldehyde or even boric acid in small amounts. It seems proved that formaldehyde used as a preservative tends to impair the nutritive value of milk, and its tendency is also to interfere with digestive processes. It would therefore be unwise to encourage the use of formaldehyde in the public milk supply even under any possible restrictive regulations.

EDITORIAL NOTES.

Pelvic Disease and Insanity.

The *Journal of the American Medical Association* of September 1, 1900, contains some papers read at a symposium upon "The Relation of Pelvic and Intra-abdominal to Nervous Diseases," before the Section on Obstetrics and Diseases of Women at the last meeting of the

American Medical Association. It is good to see a more conservative tone in general on the part of our gynecological friends, a seeming willingness to admit that there are limitations even to their art, and a reluctant consent to confess that possibly the whole cause of insanity is not to be *corralled* within the female pelvis. Some of the old-time hysterical bumptiousness and disposition to claim for the gynecologists all credit for advance in knowledge as to the etiology of insanity is still displayed, and it is these extraordinary, unreasonable, and ill-founded claims that have done so much to retard arriving at the real truth. On the whole, more credit is now given the alienists for the rational position and useful scientific work which they have maintained in their unfailing desire to get at the real truth, unblinded by the absurd claims made in some quarters as to the enormous percentages of cures of insanity to be justly expected from pelvic operations.

Modern Medical Teaching.

Teaching a medical student to think, and giving him during his college training a foretaste of those problems which will confront him in actual practice, are features of the student's tuition that are sometimes neglected in modern schools. The didactic lecture is gradually losing ground as a means of instruction, but it certainly holds on longer in the medical than in any other department of university work. For beginners, didactic lectures and text-book recitations have their advantages, but they are not adapted to the needs of the upper classmen. The clinics for the junior and senior classes, which have to some extent superseded the lecture work, are in many cases mere "vaudeville." The students even in the front row of the amphitheater see only the surgeon's back and the pretty costumes of the nurses. More individualization seems necessary in teaching, the division of classes into small sections, personal association with the instructors, and the giving to students typical cases for examination, diagnosis, and treatment.

To Administer Cod-liver Oil.

A somewhat clever ruse, practiced for the purpose of administering cod-liver oil to those who object to it, is described as breaking up a conspiracy among the patient's olfactory, optic, and pneumogastric nerves. The patient probably confesses he likes sardines, so without his becoming aware of the trick, the preservative cottonseed oil is emptied away, and the sardine box is filled with fresh cod-liver oil, of which every day the patient unconsciously takes a substantial amount.

ITEMS AND NOTES.

THE German Hospital in Buffalo will soon be completed.

DR. RUDOLF VIRCHOW'S golden wedding was celebrated August 24.

DYSENTERY in a virulent form is prevalent in Yocumtown, Pennsylvania.

THE new medical practice act of Texas has been approved by the State Medical Association.

A SANATORIUM for invalids of moderate means is to be established at Asheville, North Carolina.

THE Norwegians in St. Paul have started a movement toward the establishment of a hospital for their countrymen.

A SCHOOL of tropical diseases similar to that already in existence in London is likely to be established in Hamburg, Germany.

DR. JACOB M. DA COSTA, of Philadelphia, died suddenly from heart disease September 11, at the age of sixty-seven years.

THE plague in Glasgow continues with an occasional new case. Reports now show twelve cases and 112 persons under observation.

CONJUNCTIVITIS is very prevalent in New York, and the eye clinics are reported to be thronged with sufferers from this unpleasant malady.

THE Royal College of Physicians in England has recommended the standardization of antitoxins to be done in a government laboratory.

ONE hundred and fifty-two deaths were caused by sunstroke last July in New York City, according to the bulletin of the State Board of Health.

MONTREAL is building a crematory. Arrangements have been made to accept Sir W. C. McDonald's offer to build and endow the institution.

A NEW medical dispensary, the cost of which is estimated at nearly $200,000, will be erected by the St. Bartholomew's Church Corporation, New York City.

DR. I. N. LOVE, of St. Louis, has removed to New York to accept the position of professor of medicine in the Post-Graduate School of Medicine.

Fears of a potato famine in Ireland are beginning to be expressed, and the outlook for the coming winter is as serious as the famine years of 1846–47.

Cornell University Medical College is now established in its new building on First Avenue, between Twenty-seventh and Twenty-eighth Streets, New York City.

It has been estimated by physicians that seventy-five per cent of the population of Chicago have recently been suffering from gastritis, gastroenteritis, and cholera infantum.

The transport *McClelland*, which arrived in New York recently from Havana, is still under quarantine in the harbor, one passenger having suspicious symptoms of yellow fever.

There are at present in Bellevue Hospital, New York, two boys suffering from typhoid fever, whose illness is attributed to using the public baths contiguous to the mouths of sewers.

The next annual meeting of the Southern Surgical and Gynecological Association will be held in Atlanta on November 13, 14, and 15, under the presidency of Dr. A. M. Cartledge, of Louisville.

A local board of health in one of the districts of Vienna has placed placards in all the public gardens and parks, directing the women who visit these places to hold up their skirts if they trail upon the ground.

The Chicago Health Department has been notified that it has been awarded one of the grand prizes at the Paris Exposition for its exhibit of blanks, charts, and other forms in use at the office of the department.

Science is authority for the statement that Mr. George Vanderbilt is defraying the expenses of an expedition to Java by Mr. David J. Walters, of New Haven, who proposes to search for remains of *Pithecanthropus erectus*.

There were 4000 members and delegates at the recent meeting of the Thirteenth International Medical Congress in Paris. Of this number 2000 were Frenchmen, 750 Russians, 570 Germans, 350 Americans, 330 Italians, and 220 Spaniards.

According to the report of the agent of the Interior Department representative in northern waters, grippe, pneumonia, and measles have been epidemic all summer among the Eskimos. Out of a population of 400 on the Island of St. Lawrence, nearly forty died.

Dr. John F. Hill, who was elected governor of Maine, on September 10, is the second medical man to preside over the affairs of the State. In 1878 Dr. Alonzo Garcelon was elected governor. He was the only democrat ever elected to that office in Maine.

Recently a young woman in a town near Philadelphia was burned about the head from the combustion of celluloid combs worn in the hair. The accident resulted from the practice of putting burning joss-sticks in the hair for the purpose of keeping away mosquitoes.

In a letter to the *Gegenwart*, Dr. Bachmann, of Shanghai, states that Emperor Kwang-su suffers from cancer of the throat, and is unable to reign. The same view is taken by a French physician and by Dr. Sheng Lian Feng, both of whom have examined the emperor.

The Kafirs and Zulus of South Africa make use of the root of the geranium, of which there is said to be a number of varieties, all, however, of equal therapeutic efficacy, in the treatment of dysentery. They simply chew the root, but the British army surgeons give it in the form of decoction in milk. The remedy is reported to be a real specific, no failure to cure within thirty-six or forty-eight hours being recorded.

Some French chemists have recently, according to the *Medical Record*, made very extensive analyses of several varieties of oysters in order to ascertain the quantity and form of phosphorus which exists in these toothsome bivalves. They found that a dozen Portuguese oysters contain about six grains of phosphoric acid, which represents about fifteen grains of the tribasic phosphate of lime. About four grains per dozen was obtained from French oysters.

An analysis of the statistics shows that of the British officers in the Boer war in South Africa, 72.1 per thousand have been killed or have died from wounds, and that 30.6 per thousand have died from disease. Of the men, 19 per thousand have been killed or died from wounds, and 31.8 per thousand have died from disease. It is thus shown that while the officers and men suffered nearly equally from disease, the risks of the officers in action were greatly disproportioned.

The *Medical Record* is authority for the statement that Dr. J. N. McCormack, of Bowling Green, Kentucky, will receive $10,000 for his attendance upon William Goebel, after the latter was shot at Frankfort. Arthur Goebel, brother of the dead governor, has accepted a claim against the estate for $10,000 for Dr. McCormack's services. It is said that Governor Goebel's life was prolonged by Dr. McCormack until the legislature could meet and elect him governor of the State.

NEW PUBLICATIONS.

INTERNATIONAL CLINICS.

The new volume of International Clinics contains more than the usual number of interesting lectures. A description of a new instrument of precision—the kromskop—forms the subject of the first lecture. This instrument takes three negatives of an object through three composite screens of red, blue, and green, and then, by superimposing these, reproduces the object in its original colors. The present volume is illustrated with kromograms. A feature of the current number is an abstract of the proceedings of the last meeting of the American Medical Association.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, etc. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M. With the Collaboration of John Ashhurst, Jr., M.D., of Philadelphia, and James T. Whittaker, M.D., of Cincinnati. With Regular Correspondents in Montreal, London, etc. Volume II, Tenth Series, 1900. Philadelphia: J. B. Lippincott Co., 1900.

THE URINE.

Among the new text-books awaiting the patronage of medical students will be found this well-conceived manual of urinary diagnosis. It is written from the standpoint of the differential diagnosis of kidney disturbances, and more explicit attention is devoted to this side of the subject than to the purely chemical aspect. Especially excellent appear the descriptions of normal and pathological products found in the urine, and their relation to disease is ably epitomized. This manual is sure to achieve a much merited success. The illustrations are realistic, and will greatly assist the student in the microscopical study of his subject.

Clinical Examination of the Urine and Urinary Diagnosis. A Clinical Guide for the Use of Practitioners and Students of Medicine and Surgery. By J. Bergen Ogden, M.D. Illustrated. Philadelphia: W. B. Saunders & Co., 1900.

THE STUDENT'S MEDICAL DICTIONARY.

This well known dictionary appears in a new edition, illustrated and much enlarged. The work claims a high place among lexicons, and its precise and accurate definitions make it of great value to the student or practitioner. So far the work has stood the severest tests imposed upon it, and references to it have not given disappointment.

The Student's Medical Dictionary. Including all the Words and Phrases Generally Used in Medicine, with Their Proper Pronunciation and Definitions Based on Recent Medical Literature. By George M. Gould, A.M., M.D. Eleventh Edition, Enlarged, with Many Illustrations. Philadelphia: P. Blakiston's Son & Co., 1900.

PROGRESSIVE MEDICINE.

This quarterly digest of medical science continues its excellent work. For thoroughness and completeness it is a model of condensation. The fields of medicine and surgery have been brought completely under review in the present number.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Assisted by Charles Adams Holder, M.D. Volume III, September, 1900. Philadelphia and New York: Lea Brothers & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Surgical Hints.

The September issue of the *International Journal of Surgery* contains the following surgical hints:

In using alcohol as a stimulant it is well to remember that only comparatively small amounts should be given for this purpose, and that large doses are injurious by causing temporary stimulation followed by depression.

Do not prescribe iron for anemic young women suffering from profuse menstruation, since in these cases the drug seems often to make the trouble worse. Arsenic is the most effective drug in these patients, while iron is indicated in those who suffer from anemia accompanied by scanty and poorly colored menses.

It occasionally happens that a patient complains of dysmenorrhea, and that questioning elicits the fact that the pain every month is most pronounced upon the right side, sometimes pretty high up. In these cases examine the appendix as carefully as possible, as it will now and then be found to be inflamed and to be the chief cause of the pain.

Hematuria due to renal tumors is commonly painless, starting and ceasing without appreciable cause, and is not usually affected either by rest or movement, although there seem to be exceptions to this rule. If hematuria be due to stone it is less abundant, and when caused by cystic neoplasms it is more constant and persistent than when the kidney is the source of the trouble.

Laparotomy is justifiable in cases of perforating gastric ulcer, if the surgeon is able to operate soon after the occurrence of the perforation. In good hands the operation is more successful than the adoption of an expectant policy. In gastric ulcers which have not broken through the stomach walls, exploratory operation and resection of the diseased area is advisable if the pathological condition grows progressively worse, notwithstanding medical treatment.

The Expectancy of Life in Cases of Cancer of the Breast.

A. E. Barker (*Lancet*, Sept. 8, 1900) says that the gloom which has hung over the question of the expectancy of life in cancer of the breast has hitherto been fully justified. Our pathological knowledge is now much more accurate than formerly in regard to the commence-

ment and mode of dissemination of cancer of the breast. Carcinoma of the breast is probably for a short time a purely local disease. It very soon begins to spread from the primary focus into the surrounding tissues by way of the lymphatics. Three systems of lymphatics participate in this process—the epimammary under the skin, the mammary in the breast substance, and the submammary in the fascia covering the pectoral muscles. The lymphatic glands of the axilla receive most of the lymph and cancer germs from these systems, and act as a dam to their further progress for a time. An excision of the breast to be effectual must be early. When disease has infected the muscles, palliation alone can be expected from surgical interference, and it is questionable whether very extensive operations involving risk from shock ought to be performed with only this end in view. From a list of over 100 cases, the writer shows that sixteen per cent lived over five years and 33.7 per cent over three years.

Prophylactic Measures and Precautions to be Observed After Simple Fractures, with a View of Obviating Such Degenerative Lesions as may Arise in Consequence of Injuries of the Arteries or Circulatory Apparatus.

Thos. H. Manley (*St. Louis Medical Review*, Aug. 25, 1900) says that as there are good reasons to believe that the union of fractured bones is sometimes delayed, or even wholly arrested, by the premature or too rigid adjustment in fixative apparatus, in consequence of their being too long employed, caution should be observed not to unduly constrict the circulation by any sort of mechanical appliance; rather, on the contrary, it is probable that in not an inconsiderable number of fracture cases the circulation of the limb is favored, the nutrition improved, reparative osteogenesis hastened and perfected, by occasional moderate motion, massage, and only such an adjustment as will provide support alone to the limb, without simultaneously exerting too much pressure.

An Unconsidered Property of Alcohol in Disinfection of the Hands.

Dr. Braatz (*Münch. Med. Woch.*, Aug. 29, 1900) says that in an experimental revision of Furbringer's process the question came up as to which of the different parts of the process was the most important of itself, and the answer to the question was that washing with alcohol alone gave better results than washing with sublimate solution alone. Why the alcohol acts so favorably is not clear, as the solvent action

on fat and the bactericide action are lower than in the case of other substances used. On the basis of his own observation the author came to the conclusion that the action of alcohol depends on its power of expelling the air from the pores of the skin. These pores, as is known, represent tubes the outer ends of which are in free communication with the external air. If water is to penetrate into a hollow tube the air must first be expelled. It is the same with the pores and depressions of the skin. So long as air remains in them water can only penetrate imperfectly, and the impurities lying there can only be imperfectly washed away. The air in the pores and depressions forms a protection to the impurities clinging to the skin. Alcohol has the property of expelling this protecting covering of air in a manner unknown in the case of other detergents, and in this way is explained why it stands in the first rank among the various materials used in systematic disinfection of the hands.

A Case of Congenital Dislocation of the Wrist.

Philip Hoffman (*Pediatrics*, Aug. 1, 1900) reports a case of this rare condition in a child, a male, who came under his observation one or two days after birth. The right carpus was displaced forward, but the ligaments, which were lax and unstable, allowed easy though but temporary reduction to the normal. There was no evidence of traumatism. The bones were normally developed. The opposite upper extremity presented a condition of clubbed hand with deficiency of the lower half of the ulna and inward deviation of the hand. The infant's right femur was one-fourth of an inch shorter than its fellow. The only treatment given was corrective manipulation by the nurse. The child is now over two years of age. The displacement, which is still present, can be temporarily reduced, though not with the same facility as at first. Nevertheless, the child has good use of the hand.

MEDICINE.

Erosions of the Stomach.

Dr. E. Quintard (*Medical Record*, Sept. 15, 1900) says that if the stomachs of some patients are washed out during a fasting condition, the wash-water is often found to contain pieces of mucous membrane; and furthermore, it is often found that after a test breakfast the gastric filtrate of such patients gives either a neutral reaction or else a slightly acid one. Again, there is an absence of free hydrochloric acid and a negative or doubtful reaction in reference to lactic acid,

but the motility of the stomach is good, and in other respects the stomach is normal.

From a consideration of a number of cases which came under the writer's observation, he has arrived at the following conclusions:

1. That from time to time we see patients in whose stomach washings are repeatedly found small fragments of the gastric mucous membrane; on an average one to four of such pieces are found in a washing, their size varying from two to seven centimeters long and about two to three centimeters wide. The repeated finding of such pieces of mucosa in the wash-water shows that we are dealing with a case of erosion.

2. That such erosions occur under varying pathological conditions, and that as a consequence the functional signs vary accordingly.

3. That the exact etiology and pathology of such erosions are at present not definitely known; that in the great majority of cases at least where such tiny fragments of mucous membrane are found in the wash-water the patient gives a definite and peculiar clinical history distinct from that of round ulcer or from the exulceratio simplex described by Dieulafoy.

4. That as a consequence these cases should be regarded as a distinct class clinically and treated as such.

5. That primary ulcers from known specific and constitutional infections, such as tuberculosis, syphilis, etc., run a varying course.

6. That ulcers appearing after serious burns of the skin are for the most part intestinal and present very few gastric symptoms, the general lesion masking the same.

Exclusive Soup Diet and Rectal Irrigations in Typhoid Fever.

A. Seibert (*Archives of Pediatrics*, September, 1900) has, from his experience with an exclusive soup diet and with rectal irrigations in typhoid fever, obtained the following results:

1. Delirium, headache, insomnia, nausea, vomiting, and tympanites usually disappeared within forty-eight hours of treatment.

2. Tympanites, nausea, and vomiting never developed in any patient, even when complicating pneumonia was present.

3. The fur on the tongue disappeared within a few days.

4. Appetite came frequently on the fourth day of treatment, even when the thermometer registered 102° to 103° F.

5. Even excessive diarrhea (fifteen to twenty-five daily stools) disappeared invariably within the first week of treatment.

6. In all uncomplicated cases the temperature began to decline within twenty-four to forty-eight hours after the beginning of treatment, and invariably would reach the normal figure within ten to twelve days.

7. In cases complicated by pneumonia, nephritis, or phlebitis, when treatment began the temperature usually remained in accord with the inflammatory conditions found until these also disappeared, while the cerebral, gastric, and intestinal disturbances usually subsided as rapidly as in the uncomplicated cases, excepting anorexia.

8. Complications, when not present at the start, were very rare, and then usually developed within the first two days.

9. Intestinal hemorrhage was noticed in three cases, none ending fatally. Perforation did not occur.

Enuresis and "Irritable Bladder" in Children.

Frederic Bierhoff (*Pediatrics*, Sept. 1, 1900) says the treatment that has given him the greatest satisfaction, both in adults and children, has been the following: Where the patients were too small to admit of direct local treatment, hot sitz baths, once or twice daily, the appropriate treatment of accessory causes, the restriction of fluids in the evening, combined with a light evening meal; at night, where possible, the child was laid so that the head was lower than usual, either by laying a pillow under the hips, or, better still, by removing the pillow from under the head, and raising the foot of the bed. Where local treatment was possible, applications in the endoscopic tube, especially directly to the sphincter itself and the mucous membrane of the trigonum vesicæ, or by vesical irrigations and instillations. In this way proper diagnosis and properly applied treatment will usually effect a cure in from a few days to a few weeks.

THERAPEUTICS.

On the Pathology and Therapy of Angina Pectoris.

Prof. Theodore Schott (*Lancet*, Sept. 8, 1900) says that angina pectoris must be regarded not as a disease *sui generis* but as a series of symptoms. Even, however, in regard to angina pectoris vera, opinions still remain unsettled and divided. Some hold the opinion that angina pectoris must be attributed not to an increase but to a further reduction of the muscular energy of a heart already enfeebled. The processes which are found to be associated with angina pectoris vera are in the first place sclerosis of the coronary vessels, alterations of the aortic

valves, and aortitis. In the earliest stages of this cardiac disease it is frequently very difficult to certify to difference in strength and character of the heart's sounds in the intervals between the attacks as compared with those of unimpaired health. The characteristic feature, which is attested by percussion at the beginning of the disease, is debility of the left heart.

The treatment may be considered under two heads, namely: (1) the therapy of the anginal fit itself, and (2) the treatment of the heart in the intervals between the attacks. The actual paroxysms are most efficaciously relieved by the nitrites. Nitroglycerin is in most cases superior to the nitrite of amyl, as its effect is mostly more prompt and intense. Paroxysm of pain may also be relieved by the application of external measures, such as friction with spirit of wine. The writer says he has found the application of heat often gives marked relief or absolute suppression of the pains. When the pains are very intense, recourse must be had to narcotics. In the intervals of the attacks, and indeed often in the course of the attacks, measures must be taken to stimulate the heart and to strengthen it.

The Treatment of Gastric Ulcer.

W. S. Low (*Lancet*, Sept. 8, 1900) recommends mucin in the treatment of gastric ulcer. Mucin is a compound substance, being composed of a proteid and a carbohydrate called "animal gum." It is the principal constituent of mucus, and is very widely distributed in the body, occurring in epithelial cells, goblet cells, and mucous glands. There are probably several mucins, and they are all viscid and tenacious and precipitated by acetic acid, and dissolved by dilute alkalies. The writer recommends ten grains each of mucin and bicarbonate of soda every two or three hours. This solution effectually protects the ulcer and the sensitive and inflamed gastric wall, and regulates the bowels. The functions of mucin in the animal economy may be various, but one most certainly is that of the protection of the delicate membrane that it pours over.

Sozoiodolate of Sodium in Scarlatinal Sore Throat.

Ad. Baginsky (*Wiener Klin. Woch.*, Aug. 9, 1900) has long since relied upon a mixture of bichloride of mercury 5 centigrammes, and sulphichthyolate of ammonium 5 grammes, to 100 grammes of excipient, as a local application in severe angina. However, of late, better results were secured from the use of equal parts of sublimated sulphur and sozoiodolate of sodium in insufflations. Where these insufflations produced gagging, one-half teaspoonful of a sozoiodolate

solution was exhibited three times a day. Inside of two to three days the caseous exudates are eliminated and the cleansed mucous surface assumes a healthy coloration. Baginsky believes that the sozoiodolates constitute a valuable adjunct in the treatment of the severe ulcerative pharyngeal complications of scarlet fever.

Ringworm of the Scalp.

Du Castel (*Münch. Med. Woch.*, Aug. 7, 1900) advocates epilation and scraping of the affected parts, followed by multiple subcutaneous injections within the affected parts of one drop of the following mixture:

Corrosive sublimate	.01 Gm. (1-6 grain).
Tartaric acid	.50 Gm. (8 grains).
Cocaine hydrochlorate	1.00 Gm. (15 grains).
Alcohol	
Distilled water	of each 30.00 Gm. (1 fluidounce).

Nitrate of Lead in Soft Chancre.

Melazzo (*Revue Méd.*, Montreal, Aug. 22, 1900, p. 59) recommends washing the sore with a one-per-cent solution of bichloride, and after carefully drying the same with absorbent cotton, applying finely ground nitrate of lead, which should not however encroach upon healthy tissue. An appropriate dressing covers the whole. An eschar forms in forty-eight hours, which soon becomes detached, leaving behind a healthy granulating wound.

Sea-salt in Acne Varioliformis.

Luithlen (*Wiener Klin. Woch.*, 1900, No. 31) reports excellent results from the local use of sea-water—and eventually of a 1.2-per-cent solution of sea-salt in water—in several cases of acne varioliformis, in which the necrotic process became suspended, existing ulcerations healed readily, while the occurrence of new eruption was prevented, at least during the course of treatment.

Eczema of the Scalp in Children.

Resorcini	0.50 to	1.00 Gm. (7 to 15 grs.).
Sulphuris	2.00 to	4.00 Gm. (30 grs. to 1 drachm).
Lanolini	5.00 to	10.00 Gm. (1 to 2 drachms).
Adipis		100.00 Gm. (3 fluidounces).

M. f. ung. S.: To be used daily.

—*L'Union Médicale du Canada*, June, 1900.

An Efficient Diaphoretic.

The *Gazetta degli Osped. e delle Clinicke* adverts to Graefe's diaphoretic remedy, which deserves to be saved from oblivion. The prescription calls for:

℞	Camph. pulv	2 centigrammes.
	Pulv. opii	3 centigrammes.
	Pot. nitr	20 centigrammes.
	Sacchar	10 centigrammes.

M. For one powder, to be taken at bedtime in a cup of tea.

—*Münch. Med. Woch.*, Aug. 14, 1900.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Early Diagnosis and Treatment of Laryngeal Cancer.

Before the last congress of the American Laryngological Association, held in Washington, D. C., an interesting discussion took place (*Laryngoscope*, August, 1900). Dr. Mackenzie, of Baltimore, speaking of the methods of diagnosis and their comparative value, said there were three principal methods that might be enumerated in the order of their usefulness and importance:

1. The naked-eye method, or diagnosis by direct inspection supplemented by clinical phenomena.
2. Thyrotomy.
3. The microscope.

It is impossible to exaggerate the importance of naked-eye diagnosis in the detection of laryngeal cancer. Unfortunately, even the best surgeons relegate it to a subsidiary place and lose no time in procuring a portion of a suspected growth for examination. The removal of the "piece for microscopic examination" too often means only the beginning of the end. We should teach ourselves to rely more and more upon the naked-eye appearance in these growths. As objections against removal of tissue for examination may be urged: (1) It subjects the patient at once to the dangers of autoinfection at the point of incision, and to metastasis elsewhere; (2) it stimulates the local growth of the cancer; (3) the method is often inconclusive, misleading, and sometimes practically impossible.

Thyrotomy is justifiable in these cases when laryngoscopic examination leaves doubt as to its true nature, or fails to define the exact territory occupied by the disease.

The general principle of treatment in cancer of the larynx is sufficiently simple. It is, or should be, like the treatment of cancer elsewhere in the body—total extirpation of the growth, through liberal portions of healthy tissue, together with the neighboring area of possible lymphatic infection. Surgical treatment has failed in the past because the methods have not been sufficiently radical. Early total extirpation of the entire organ with its tributary lymphatics and glands, whether the latter be apparently diseased or not, is the only possible safeguard against local recurrence and metastasis.

The outlook, in the present state of our knowledge, is extremely unsatisfactory and somber. Not till the entire larynx and all neighboring lymphatics are removed will there be an improvement in the statistics and prognosis of cancer of the larynx.

The Treatment of Whooping-cough with Antitussin.

Heim (*Berliner Klinische Wochenschrift*) regards antitussin as the most valuable therapeutic agent thus far brought forward for the treatment of whooping-cough. It is an ointment composed of five parts of difluordiphenyl, ten parts of vaselin, and eighty-five parts of chemically pure lanolin. Heim used this remedy in sixteen, for the most part very severe, cases of pertussis, and always with gratifying results. In nine cases of unusual severity the children were in a convulsive state when the treatment was initiated. These were infants from three to eighteen months of age. In all cases, after rubbing the throat, chest, and back, there occurred a prompt and often an astonishing improvement in the patient's condition. The remedy diminished the spasms and increased the secretions, and after two days of treatment there was decided decrease in the coughing attacks. Complete recovery took place sometimes in a few days, and at the longest within two weeks. He observed no ill effects from its use. He further recommends the use of antitussin in acute catarrhal affections of the larynx and pharynx.

Hemorrhage After Removal of Adenoid Vegetations.

In an article upon this subject, H. Cordes (*Internat. Centralbl. für Laryngol.*, vol. xvi, No. 7) says that hemorrhage after the removal of adenoids may be caused: (1) By constitutional dyscrasia—hemophilia. (2) Disease of the heart, in particular left-sided hypertrophy and arteriosclerosis. The latter condition is found only in adults, and in children need not be considered. (3) Anomalies in the course of the external carotid. In some of these cases one finds on the posterior wall of the pharynx at the height of the anterior surface of the atlas a

bony boss which makes the operation difficult. (4) Excessive use of cocaine. (5) Shreds of adenoid tissue left behind; removal of these pieces stops the hemorrhage. (6) In women occasionally severe hemorrhage occurs when the operation is performed at the time of the menstrual period. (7) In some cases severe hemorrhage occurs without any recognizable cause.

One Thousand Eight Hundred Cases of Adenoid Tumors.

Dr. Arslan, of Padua, has published (*Archiv di Otol., Rhinol. e Laring.*, vol. ix, p. 159) a very valuable statistical report of all the important points which he observed in his large number of cases. He lays great stress upon the care of the nasopharynx in cases of otitis, since it is possible for the smallest tumors in this locality to produce this affection. The author reports ten cases of Basedow's disease in which the symptoms of this affliction depended upon adenoids. In five of these patients the symptoms entirely disappeared after removal of the vegetations. Of special interest is his report regarding a case of Jacksonian epilepsy in a child seven years of age, who had remained free from any epileptic attacks for four years after adenotomy. For producing narcosis he used ethyl bromide in the majority of cases.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,

Lecturer on Dermatology, Detroit College of Medicine.

Discussion on the Parasitic Origin of Eczema.

At the Fourth International Congress of Dermatology (Paris, Aug. 2 to 9) James Galloway and J. W. H. Eyre summarized their conclusions as follows (reported in the *British Journal of Dermatology*, September, 1900):

1. Cocci producing whitish cultures are present in early and uncomplicated lesions of papulo-vesicular eczema. They are all examples of the type staphylococcus pyogenes albus, and possess to a greater or less extent the well known pathogenetic powers of this organism.

It appears to the authors that there is no reason for separating these organisms into species, and still less reason for stating that one of these species is the specific cause of eczema.

2. In all probability there are many factors at work in the production of any attack of eczema, and although they do not think there is evidence for the statement that this organism is the cause of the

disease, they cannot help considering that this white coccus, and other cocci, such as the staphylococcus pyogenes aureus and the streptococcus pyogenes, which are so often present, especially in the later stages of the disease, must have very important influences on the development of the malady. These organisms do not grow in the injured skin in such large numbers without producing some effect, and from the authors' knowledge of their influence in other situations this effect can hardly be other than noxious.

The local infectivity and chronicity of eczema, the ease with which purulent manifestations occur, should be in all probability ascribed to the presence of such bacteria. The knowledge of their presence and of the results they produce must be a powerful controlling influence in treatment.

3. Other factors are concerned in the production of any attack of eczema, of which the following may be mentioned as especially efficient:

First, certain organic lesions, especially such as produce circulatory stasis in the skin and consequent edema and malnutrition of both cutis and epidermis.

Secondly, the predisposition of the skin, usually recognized as the seborrheic state, which permits the free growth on it of vegetable parasites, and especially of certain bacteria. This state is probably the most effective of all the conditions of susceptibility or of lowered resistance in the causation of eczema.

Thirdly, the clinical evidence seems to be conclusive that there are certain conditions of imperfect metabolism which predispose to the onset of eczema, or at any rate to its recurrence, and of these the most common are those associated with improper digestion and assimilation of food, especially in the adult; want of exercise, the impure atmosphere of cities, etc., aggravate this condition, and increase the risk of recurrent attacks of eczema.

Though the conditions mentioned in this last paragraph have been stated by some observers to be without any effect in eczema, we are strongly of opinion from personal observation that the influences exerted by errors in the body metabolism are very important factors in its causation.

Cutaneous Manifestations in Diabetes Mellitus.

In a paper read at the sixteenth annual meeting of the Fifth District Branch of the New York Medical Association, May 22, 1900 (reported in the *Journal of the American Medical Association*, Sept. 15, 1900), Dr. S. Sherwell, of Brooklyn, N. Y., said in part that skin symptoms are frequently the first to call our attention to the presence of

the morbid condition which from its most noteworthy and constant index, presence of sugar in the urine, we call glycosuria. The list may be made out in the order of relative frequency, as follows:

1. Xeroderma, or a condition of dry skin.

2. Pruritus, without any, or at least any noteworthy, objective lesions, the genital regions in both sexes apparently suffering most.

3. Eczemas, partly neurotic, at other times catarrhal, having as chief seats the genitals, and flexures of the body and limbs.

4. Furunculosis, often general in character, but sometimes regional. This is often the case with the very common occurrence of its analogue—carbuncle. The seat of preference seems to be the extensor aspects of the body, as nucha, gluteal region, etc.

5. Conditions of erysipelatous manifestations and gangrene.

The dry skin of glycosurics is capable of a simple explanation. The parched lips, the dry throat, the dry condition of the mucous membrane, from excessive excretion of water by the kidneys, are their own explanation. This condition should always excite suspicion in the medical mind.

Pruritus is always suspicious, and the urine should be carefully studied, not only that of the morning, the so-called "urina sanguinis," but that obtained after a full, rich evening meal. Sometimes the latter shows considerable sugar, when that of the morning does not.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

The Plantar Reflex, with Especial Reference to the Babinski Phenomenon.

Walton and Paul report, in the June number of the *Journal of Nervous and Mental Diseases*, a valuable study based upon 700 examinations, to which various Massachusetts hospitals for the insane, almshouses, nurseries, lying-in and general hospitals contributed clinical material.

The normal plantar reflex was carefully studied, as also this reflex in a variety of diseases.

The Babinski phenomenon is thus defined: "The true extensor reflex under consideration consists of a deliberate, marked extension and separation of the other toes."

Their conclusions are thus summed up:

1. In health either of the following conditions may appear on tak-

ing the plantar reflex: (*a*) Flexion of all toes; (*b*) flexion of some (generally outer) toes; (*c*) flexion of all toes on one side and of some (generally outer) on the other; (*d*) entire absence of movement on both sides (about ten per cent); (*e*) flexion of all or some (generally outer) toes on one side, with absence of movement on the other (at least ten per cent); (*f*) occasionally (in sensitive individuals) quick semivoluntary indeterminate movements, sometimes of flexion, sometimes of extension.

2. In early infancy no constant or characteristic movement of the toes appears, though extension is rather more frequent than flexion.

3. The Babinski reflex obtains in about seventy per cent of hemiplegics and diplegics, and in approximately the same percentage of cases with disease involving the pyramidal tract in the spinal cord.

4. The Babinski reflex (deliberate and constant extension of the great toe, with or without extension and separation of other toes) is never present in health, and the authors' observations lead them to doubt its existence in either functional or organic nervous or other disease not implicating the pyramidal tract.

5. This reflex is often the earliest to appear in pyramidal tract disease, *e.g.*, at the onset of a hemiplegic attack before the establishment of the exaggerated knee-jerk and ankle clonus; it may persist during a period when other reflexes are absent, *e.g.*, when knee-jerk and ankle clonus are wanting on account of ankylosis, contracture, and muscular wasting, as in long-standing diplegia, or of degenerative sequences, as in combined system disease. This reflex furnishes, therefore, a most important practical aid in diagnosis.

6. This reflex very exceptionally appears in cases not conforming to recognized types of pyramidal disease (meningitis, hydrocephalus, poisoning, as by alcohol or uremia). These instances are too few to impair materially the diagnostic value of the phenomenon; in fact, the Babinski reflex alone should here rather lead us to suspect pyramidal involvement, as by edema or indirect pressure.

Cerebral Localization.

From the paper by Sydney Kuh, in the *Journal of the American Medical Association* of August 25, 1900, reviewing the knowledge on this subject, the following points are gathered:

Destruction of the prefrontal region is said to annihilate the power of directing one's attention entirely when the lesion is bilateral, while a unilateral lesion causes only a transitory mental change. Mental weakness, loss of memory and attention, apathy, and childish behavior are common symptoms.

That cerebral centers may migrate from one side of the brain to the other was at least made probable by an observation of Oppenheim. His patient had been right-handed up to the age of seventeen, when an injury to the right hand compelled her to learn to write with the left one. When at the age of fifty-nine, a tumor developed in the right hemisphere; it caused left hemiparesis with aphasia.

Cerebral hemiplegia, whether it be due to a superficial or a deep-seated lesion, never means a complete paralysis of one-half of the body. Paralysis of cortical origin is flaccid in the beginning and presents late contractures due to secondary degeneration in the pyramidal tracts.

Monoplegias of the leg, which have been bilateral in a large percentage of cases, are explained by the close proximity of the two paracentral lobules.

Similarly, the immunity of the upper branch of the facial nerve in cerebral hemiplegia is given in explanation by the probable control exerted by each center on both nerves, the muscles so supplied being among those generally used simultaneously on both halves of the body.

Centers for mastication and rotation of the head, located in animals, have not yet been satisfactorily determined in man.

While it may locate cortically the initial center in true cases of Jacksonian epilepsy, not every localized spasm of organic nature may be regarded as conclusively cortical.

Valuable points in determining Jacksonian from idiopathic epilepsy are limited spasm at first, loss of consciousness late, if at all, epileptic cry, falling and biting tongue usually absent, post-epileptic coma slight and of short duration, etc.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Apparent Death of the New-born.

Schultze (International Congress, Paris, in *Rev. Méd.*, Montreal, Aug. 22, 1900) advocates the following plan of precedure:

1. If the child be cyanosed, if a certain amount of muscular tonus still persist, do not cut the cord until all pulsation has ceased. Remove aspirated mucus from child's mouth. Stimulate cutaneous reflexes. If there be no immediate reaction, dip him rapidly in cold

water, and immediately place him in a warm bath. Repeat these immersions until the child cries lustily.

2. If, however, the child be pale and flaccid, lose no valuable time in attempting to awaken reflexes. Cut the cord at once, remove mucus from mouth and larynx by pressing the base of the tongue and epiglottis upwards, and proceed at once with artificial respiration, according to Sylvester's or the author's (Schultze's) method. Begin with a prolonged expiratory movement. We have no better means of removing from the bronchial ramifications any mucus or fluids which may have been aspirated. After having secured from eight to ten complete respiratory movements to the minute, place the child in a warm bath. You will soon notice the heart-beats becoming stronger and more frequent, the skin reddening, muscular contractility reappearing. Should these signs fail to appear in a reasonable time, repeat artificial respiration. Spontaneous inspiratory movements set in after induced expiration. Now place the child in the warm bath. Should respiratory movements, however, be but shallow, put him in ice-cold water. He will react at once, pull up his legs, and yell. The medulla now responds to reflex incitation.

Never consider a child born in an asphyxiated condition as out of danger until he has yelled loudly and continuously.

Functional Disorders of the Female Sexual Organs.

Adler, in a discussion upon Koblanck's paper concerning functional disorders of the female sexual organs (*Centralbl. f. Gynäk.*, Aug. 25, 1900), expressed the belief that nervous disturbances in the female are readily considered as pathological reflexes and subjected to gynecological therapeutics, while the converse is quite as often the case, and one frequently finds a primary neurosis inducing secondary genital disturbances. This is true in almost every instance of menstrual trouble. Thus of masturbation, which is not in itself an efficient cause of dysmenorrhea, but proceeds from the same identical source, to wit, unsatisfied sexual striving. Koblanck underrates the frequency of masturbation in the female, which, according to Rohleder, obtains in ninety-five per cent of the subjects.

A remarkable disparity exists between sexual excitability in the male and in the female. While in the former sexual orgasm proceeds with sudden, cyclonic impetuosity and decreases in the same ratio, the orgasmic curve of the female evolves in gradual intensification and recedes with proportionate slowness. The orgasmic acme—the top of the curve—often remains a desideratum (sexual anesthesia in the female being much more frequent than is commonly accepted), in which case masturbation or coitus is carried only to a certain point

below the maximum, in consequence of which, by reason of the deficient orgasmic lysis, a condition of chronic congestion may result with its concomitant genital disturbances.

Sugar as an Oxytocic.

Madlener (*Münch. Med. Woch.*, Aug. 21, 1900), referring to Payer's paper upon "The Influence of Sugar upon Metabolism in Pregnancy and During Labor," in which Payer records decided oxytocic effects at different stages of parturition, confirms the efficiency of sugar in cases requiring increased muscular effort, and relates his own experiments while mountain-climbing. Madlener ascribes this particular influence of sugar to its rapid absorption into the blood. No food is taken up so readily; none imparts to the system such prompt and effective stimulation as sugar.

Madlener had occasion to experiment in six cases of uterine atony, to wit, three times in primary and three times in secondary cases of deficient uterine contractility. In five cases out of six the oxytocic influence was noticeable within from one-half to one hour after exhibition. Five cases terminated by spontaneous birth. He used thirty grammes—one ounce—of sugar in a half-pint of water, and if necessary repeated the dose once. Two patients took more than prescribed (three and five ounces respectively) without untoward effects, nausea, or vomiting. In three cases out of the six Madlener noticed a decrease in the pains coupled with increased uterine contractility, as previously set forth by Payer. He strongly urges the practitioner to take advantage of this safe, inexpensive, and effective means of furthering labor.

Formaldehyde in Uterine Hemorrhage.

Gerstenberg (*Centralbl. f. Gynäk.*, Aug. 25, 1900) reports excellent results from local applications of formaldehyde in various forms of uterine bleeding. He uses the concentrated solution (forty-per-cent), and proceeds with the usual technique. In some cases he repeats the application from two to three times at one sitting. Gerstenberg recommends to make rapid applications with a small swab, and to protect the vaginal structures against the returning formaldehyde. He believes that excellent results will obtain in metrorrhagia due to unknown causes, also in climacteric hemorrhages, and ascribes the beneficial effect to the powerful stimulating influence of these formaldehyde applications upon defective uterine contractility. He claims to have in several cases avoided impending curettage by the use of intra-uterine applications of the formic aldehyde solution.

THE MEDICAL AGE

VOL. XVIII. DETROIT, OCTOBER 25, 1900. No. 20.

ORIGINAL CONTRIBUTIONS.

NEPHRITIS, WITH SPECIAL REGARD TO PROGNOSIS.*

BY FREDERICK W. ROBBINS, M.A., M.D.,

Professor of Genito-urinary Diseases, Detroit College of Medicine.

Since John Bright first gave to the profession his valuable writings on diseases of the kidneys, numerous theories, both as to pathology, symptomatology, and treatment, have been either tentatively suggested or dogmatically affirmed; and yet to-day we have no accepted classification of kidney diseases, no settled conviction as to the causes of many of their symptoms, and great diversity of opinion as to the general lines of treatment best adapted to bring cure or relief.

In reviewing the pathology of kidney diseases we learn that congestion is not inflammation; that occasionally patients die from each, and many times from each recover. It is quite possible, from symptoms and analysis of urine, to mistake one for the other, and in those cases where inflammation follows congestion it is impossible sometimes to determine where congestion ends and inflammation begins. In both conditions albumin is present; in both we find hyaline and epithelial casts. Both conditions may be sudden in their onset, and the urine may be either much increased in quantity or nearly suppressed. The one important symptom wanting in congestion, as pointed out by Delafield, is cutaneous or general dropsy. Snap diagnoses cannot, in these cases, be made, for in each case the history must be carefully considered. Exposure to drafts, ingestion of poisonous drugs, inhalation of poisonous fumes, reflex results of operation, especially upon the genito-urinary organs—any one of these may be the cause of acute congestion, while chronic congestion of the kidneys is usually associated with and due to some heart or

*Read before the Detroit Medical Society.

liver lesion. These congestions nearly all disappear with the removal of the cause, and if this is impossible, nephritis may result.

When the physician is called to see a patient, young, usually, with marked edema of feet, legs, and face, and on examination of urine finds large quantities of albumin, blood, and casts, he is likely to be anxious concerning such patient; and yet the acute forms of nephritis result in lesions which, in themselves, are not usually fatal. The intercellular substance in the tufts may be much softened and swollen; the epithelial lining of the tubes may be thickened, degenerated, thrown off in large blocks; yet nature is able to renew epithelial membranes here as in other parts of the body.

If one is to have a clear appreciation of kidney diseases he must have in mind some definite classification. It matters little to the individual whether his neighbor has the same division of the subject as himself, but much misunderstanding in discussion would be obviated could we all follow one classification, one nomenclature.

Certainly we cannot follow an anatomical classification and have any certain picture of the kidney pathology from symptoms, for they are not sufficiently definite to mark the condition. Intestinal and parenchymatous nephritis is theoretically a happy differentiation, but as a matter of fact there is no such pathological distinction. With inflammation of the tufts and tubes there is usually more or less connective tissue formation. Between the small contracted kidney with its adherent capsule, irregular surface depressions, secreting large quantities of non-albuminous urine, with a few hyaline casts, and the large kidney, secreting urine rich in albumin, casts, and epithelium from tubes and pelvis, there is a wide difference; but the number of cases where both parenchymatous and intestinal tissues are involved is so large that we are forced, in the pursuit of clearness, to accept a clinical classification, and can do no better than to follow that of Delafield; remembering that under the different divisions we may have a great variety of pathologico-anatomic conditions. He divides kidney diseases as follows: Congestive, acute and chronic; degenerative, acute and chronic; acute exudative nephritis; acute productive nephritis; chronic nephritis with exudation; chronic nephritis without exudation; also suppurative and tubercular diseases. With and without exudation simply means with or without exudation of blood serum, therefore with or without albumin in the urine.

Many individuals die from acute nephritis, and in some minds there is the feeling that a person once having suffered an attack is prone to a second, and that he has not as good an expectation of long life as another man; yet, appreciating the pathology of acute nephritis, especially the exudative form, we should as certainly expect a

man to permanently recover from it as from pneumonia or other acute inflammatory diseases.

I wish to report a few aggravated cases for the encouragement of any who may not have had much experience along these lines.

Acute nephritis does, in some instances, become chronic, and fearing such an outcome I reported my first case to the Detroit Medical and Library Association in 1894, and the prognosis was not considered favorable by those present.

Case 1.—Mr. H——, aged thirty-five, of Caro, Mich., consulted me January 2, 1894. He walked into the office with difficulty, coughing frequently, and his respiration was short and quick. His face was pale and puffy. Instantly the idea came into my mind that he had acute Bright's disease or pleurisy with effusion, and for this latter condition he had been treated by his physician, who had not examined the urine. A history of rheumatism four years before was elicited; he was also said to have had gall-stones. He had lost thirty pounds in weight and complained of pain over both kidneys; urine was scanty and red, specific gravity 1032. The urine contained many granular casts, and on boiling was nearly solid. Lungs edematous. Diagnosis of acute nephritis with exudation was made. Patient was placed in bed, fly-blisters applied over both kidneys, milk diet rigidly enforced, and sulphate of magnesia freely administered. June 30 he was much stronger; two quarts of urine passed daily; albumin present, but in smaller quantities. February 2, pulse normal; albumin present. Allowed to go home. Taking caffeine ¾ grain, citrate of iron 1½ grains, cinchona sulphate ½ grain, four times a day. May 9, stronger; acetic acid and heat negative; specific gravity 1022.

March 7, 1895. Albumin G + +; cough present. Gave codeine sulphate to relieve cough. October 25, albumin, slight trace; specific gravity 1017. Ordered the pill of the four chlorides to be taken three times a day on alternate weeks, and Yeager abdominal bandage to be worn continually. Since this time I have frequently seen the patient. He is large, strong, and never for three years has there been a trace of kidney disease. The acute attack in this case was very severe, and it was nearly two years before the cure was complete.

Case 2.—Mr. L——, aged fifty-eight, had always been in robust health and a man of good habits, but when called to see him August 1, 1898, he was worrying over the loss of his business position. He was rapidly losing flesh and passing three quarts of highly saccharine urine daily. On a modified diabetes diet he did not do well, and in October and November, 1898, he had severe carbuncles on the neck and indolent ulcers on both legs. As the sugar in the urine became gradually less, considerable albumin with hyaline and granular casts

was found. He continued to improve gradually until all sugar disappeared, and at the present time his weight is nearly normal, appetite good, and urine normal. Arsenic and iron has been the principal drug treatment.

Case 3.—December 29, 1899, I was called to see Miss B——, aged twenty-eight. Found her with slight headache; edema, which was very general; legs, knees, thighs, vulva, and face being greatly swollen. On boiling, urine became solid, while casts of several kinds were present. There was no assignable cause for these conditions, except for the fact that, contrary to her usual custom, she was wearing gauze underwear late into the fall and winter. She was in bed a week. Did not have convulsions, but it was some time before the albumin became even moderate in amount. Her pulse had been rapid for a long time and is so even yet, although she has been able to work since May 1. She is slightly anemic, and the legs show a little edema. The urine has a specific gravity of 1012, with no albumin or casts present, and she feels as well as ever.

Case 4.—Mrs. T——, six months pregnant with third child, sent urine to office for first time July 17, 1900. Had passed over thirty ounces in twenty-four hours. Granular casts were abundant. Boiling rendered urine solid. By weight there was 112 grains albumin to the quart. Legs and face were swollen, but there was no headache or great discomfort. On the 18th there was occipital headache with a full bounding pulse. Sulphate of magnesia and citrate of potash were given in large doses, but the symptoms did not improve, and at night I desired to bring on labor; on account of the religious scruples of the family I was unable to do so, but told them what might be expected. About 2 A M. on the 19th was called, and found the patient just coming out of a convulsion. Having sent for half-drachm chloral powders and instruments for venesection, I summoned Dr. E. A. Chapoton, who quickly responded, and while we were talking over the case the second convulsion ensued. I then bled the patient to the amount of one and one-half pints and gave a chloral powder by rectum, and after a few minutes twenty grains by mouth. The pulse became quiet, and as she was comfortable we soon left.

July 20, pulse tension less. Gave half a drachm of chloral every six hours. Continued the citrate of potash and milk diet. On this date, as Dr. Chapoton thought that he detected fetal movements, we did not consider induction of labor, but continued treatment.

Edema gradually disappeared from legs and face, and by July 31 she was passing over two quarts of urine, containing not over seven grains of albumin to the quart.

August 6. Six grains of albumin to the quart.

August 10. Specific gravity 1020; albumin, a trace.

August 13. A mascerated fetus came away, which probably had been dead since July 20.

To-day Mrs. T—— seems as well as ever, and is passing normal urine.

In connection with this case the question is: Was the fetus destroyed by the same poison that produced the uremia in the mother, or was it not rather the result of the abstraction of a pint and a half of blood from the mother? If such result is to be expected, why ever resort to induction of labor in these cases when the fetus is not viable. Not only is the abstraction of blood, even if indirectly the child dies, not inconsistent with the teachings of the Roman Church, but a profound sedative effect is produced on the mother, while the efforts to dilate the cervix and extract the fetus are liable to cause unnecessary nervous excitement and possibly lead to other convulsions.

That the death of the fetus is usually followed by decrease of nervous symptoms and improvement of kidney lesions and function is new to me, but in the wide experience of Dr. Chapoton this has been his observation, and I doubt if any case could better typify such result than the one reported.

IODISM.

BY DOUGLASS W. MONTGOMERY, M.D., SAN FRANCISCO, CAL.

Second only in importance to their curative properties are the disagreeable effects of drugs, and when any drug is so strikingly curative as the one under consideration, any symptoms it may produce, whether comfortable or uncomfortable, are of interest.

Considering the great amount of iodide of potash taken, disagreeable effects are not frequent—at least, the very disagreeable ones are not; but this does not lessen, however, the responsibility of the physician, who should endeavor to know the symptoms that may be produced by the agent he himself orders. These effects of iodide of potash may be merely tantalizing, as a slight iodic rhinitis, which is as annoying as a "cold" is; or they may be disfiguring, as an iodic acne, which impairs one's good looks; or they may be dangerous, causing edema of the glottis, with sudden death. Then, again, the symptoms of iodism may simulate many diseases, some where the diagnosis is of little importance, others where an error may have grave consequences. For instance, a tuberous iodide eruption may look exactly as if from syphilis.

The disagreeable effects of iodide of potash most frequently show themselves on the skin or mucous membranes.

The cutaneous manifestations are so various that Hallopeau says that if while giving iodide of potash for syphilis, for instance, unusual cutaneous phenomena supervene, the possibility of their being caused by the drug and not by the disease should be entertained.[1] Bearing this in mind, the following enumeration of cutaneous iodide eruptions is submitted:

Iodide of potash may cause an eruption resembling acne, purpura, urticaria, an urticaria hemorrhagica, an erythematous eruption, swelling and edema of the skin sometimes resembling erysipelas, a papular eruption, a furuncular eruption, a tuberous eruption, a pustular eruption, a vesicular eruption, a bullous eruption, ulceration of the skin, multiple gangrene of the skin,[2] painful subdermal nodes simulating gummata, or painful rheumatic nodosities.[3]

General Considerations Touching Skin Eruptions. — The eruption usually does not appear for several days, sometimes not for ten, fifteen, or even twenty-six days after commencing the drug. It has, however, been known to show itself in twenty-four hours. The time taken by the skin eruption to show itself has nothing to do with the form in which it shall appear, neither has the gravity of the eruption anything to do with the general state of the patient. That is to say, any kind of any of the iodic eruptions may appear at any time within the above limits, and although the eruption may be very severe and extensive, yet the patient usually enjoys good general health.

The erythematous eruption commences as a red spot that itches, and it may remain erythematous, or in from eighteen to twenty-four hours a lentil-sized papule appears in this erythematous patch, and afterward this papule may quickly turn into a pustule. The lesion so formed is a combination of papule and pustule; it is a tumor about the size of a small pea, livid red, and tipped by a pustule, and generally has a hair running through its center. These lesions are disseminated or in groups; in the beard and on the scalp they tend to be disseminated, while in other situations they are usually grouped, forming patches the size of a dollar or less. According to the grouping of these papulo-pustular elements, and the predominance or accentuation of this or that anatomical element, there is formed the erythematous, the tuberous, the pustular, or the papular iodic eruption.

All the elements, whether isolated or agminated, are encircled by an inflammatory areola. As soon as the medication is stopped no new eruptive elements appear. Sometimes even when the medication is continued the eruption may fade, but usually it goes on, becoming worse and worse. This fading of the eruption on continuance of the

drug is analogous to what is frequently observed in ordinary iodic catarrh, where, on continuing the medication, the catarrh ceases.

Rarely, but very rarely indeed, when the medication is stopped new elements continue to appear.

It is said[4] that an iodide of potash eruption may appear a considerable time—two weeks—after the cessation of the drug. This tardy appearance is said to be due to faulty elimination of small remnant quantities of the drug after the diuretic action of the larger quantities has ceased. This tardy appearance of iodism long after the cessation of the drug is extremely improbable, and would have to be backed up by very positive clinical evidence, as iodide of potash is one of the most quickly diffusible and most rapidly eliminated drugs known.

One great characteristic of the iodic eruptions is their polymorphism, and another is their sudden and simultaneous appearance in widely different regions of the body.

Iodic Acne.—The most frequent rash is the so-called iodic acne, which Giovannini has lately found not to be acne at all, but an acute inflammatory process involving the hair follicles, and only secondarily and in a less degree the sebaceous glands. It is, therefore, an acute purulent folliculitis and perifolliculitis, and not acne.[5] Like ordinary acne, however, which it resembles, it shows a predilection for the face and shoulders. At one time it was maintained that its appearance was a sign that the patient had not syphilis. This is not true. The appearance of this rash depends on a personal peculiarity, and has nothing to do with the presence or absence of syphilis.

Swelling and edema of the skin, usually involving the face, nose, and eyelids, and simulating erysipelas, are occasionally met with. A patient now under observation has repeatedly had closure of one or other eye from such a swelling of the upper lids, which was finally prevented by giving five drops of tincture of belladonna with each dose of iodide of potash.

The hemorrhagic iodide eruption is not uncommon, and most frequently appears as little spots scattered over the shins. In a patient of mine, a physician, who used to take iodide of potash for rheumatism, purpura always broke out on the legs when a dose of fifteen grains three times a day was taken. This purpura neither itched nor pained, and therefore frequently passed unnoticed by the patient.

Iodide of potash occasionally produces one of the most striking lesions in the whole range of dermatology. I refer to the tuberous iodide eruption, dermatitis tuberosa. Soft, spongy growths appear on the skin, running from the size of a pea to that of a hen's egg. They are white, yellow, or light or deep red, and are frequently constricted at the base, and sit on the skin like a tomato, resembling the large

fleshy masses of sarcoma or mycosis fungoides. Small lacunæ may form on the surface of these tumors, out through which serous fluid, pus, or blood may be squeezed. Frequently the tumors break down at the top, forming dirty, purulent-floored ulcers, from which papillary vegetations may spring. Their favorite locations are the face, the upper part of the chest, and the upper extremities. In the two instances I have seen the eruption was confined to the face. These tumors grow quickly, and, on stopping the drug, subside as quickly, leaving pigmented patches of scars. It is indeed surprising how soon this eruption disappears. One of the above mentioned patients, who was so disfigured that his doctor, in sending him to me, warned him not to go to my office, as he would scare away my patients, had at the end of five weeks almost no trace of the eruption, excepting a pitted scar on the end of his nose. This pitted scar is quite characteristic, the pits corresponding to the above mentioned sieve like lacunæ, and the lacunæ corresponding, it is said, to the openings of sebaceous glands.

This eruption must be diagnosed, as has been intimated, from mycosis fungoides and from sarcoma, and also, at any rate here in California, from that strange disease caused by a mold, first well described by Rixford and Gilchrist, which occurs in the San Joaquin Valley, and which also forms tuberous, soft, succulent, ulcerating masses, much like those of dermatitis tuberosa.

The bullous form usually appears on the face, the neck, and the upper extremities. In Broes van Dort's case, and in two of J. Nevins Hyde's cases, the bullæ appeared on the soles. Gemy[6] says the back of the hands is its most characteristic and most frequent location, and that here it arises directly from a primary erythematous patch, while on the face, for example, it passes through the papular stage before becoming a bulla. These bullæ may remain isolated or become confluent, and by confluence may attain enormous dimensions. The blisters rest on a thickened and infiltrated base. Frequently the bullæ are firm and well formed, and their contents are at first clear, later on becoming turbid, purulent, and sometimes bloody. From the start the contents may be thick and ropy,[7] or they may be a semisolid, thick pulp.[8] The bullæ usually dry down into crusts which after a time fall, leaving a brown mark which gradually fades. The base may, however, ulcerate, leaving an indelible depressed scar, or vegetations like venereal warts or those of pemphigus vegetans may spring from it.[9] Independently of dermatitis tuberosa or the bullous eruption, iodide of potash at times causes ulceration. The ulcers are deep, with irregular, ragged borders, and the floor is covered with fetid pus and necrotic masses. H. Malherbe[10] has recently described such

lesions occurring in a patient whose urine contained neither albumin nor sugar.

The Disagreeable Effects of Iodide of Potash on the Mucous Membrane. — Iodism of the mucous membranes usually shows itself in edema and acute diffuse inflammation, but Broes van Dort[11] has reported a case where it caused a papular efflorescence on the cheeks, lips, and tongue; and Neumann[12] has described a tuberous iodide eruption of the mucous membranes of the stomach similar to the tuberous iodic eruption of the skin.

The flat taste of the drug is very disagreeable to some people, while others complain of a bitter coppery taste, which may linger after taking the drug, or be continuous, or only be present on getting up in the morning.

There may be a stomatitis with salivation, bleeding of the gums, loosening of the teeth, and cracking and swelling of the tongue. The submaxillary and parotid glands may swell and become tender.

It most frequently attacks the mucous membranes of the upper air-passages, at times implicating them all like a common "cold," or attacking any one of them separately.

Recently a patient under my care, suffering from early secondary syphilis, was at first given mercury. However, because of the unusually depressing effect of the drug, it was soon stopped, and iodide of potash, in moderate dosage, was substituted. He returned the next day, a pitiable sight. His nose was running, his eyes were red and watery, his voice was hoarse, he was suffering as from a severe "cold," and he had a distressing pain across his forehead. The addition of five drops of tincture of belladonna to each dose of the iodide of potash completely allayed all the disagreeable symptoms. It is true that after a time the antidotal effect of the belladonna became less marked, and the iodism appeared in spite of it. It may be that it is this lack of permanency as an antidote that causes L. Lewin to speak slightingly of its efficiency. Its first effects, however, are frequently admirable, and it does gain time, which is often an important point in therapeutics. When administered for a long time, tincture of belladonna is itself apt to give rise to unpleasant symptoms.

The irritation of the nasal mucous membranes from iodide of potash may be one of the reasons of the difficulty so often experienced in curing syphilis of the nasal passages. L. Lewin mentions an instance where a patient who suffered from a gumma of the nose took iodide of potash with the result that new ulcerations formed constantly in the neighborhood. At the same time there was a severe coryza and iodic asthma.[13]

Just as headaches are caused by iodism of the frontal sinuses, so

may aching in the cheeks be due to an affection of the antra of Highmore. At least, this was the explanation given to a patient of mine who always complained, while taking iodide of potash, of a deep-seated, aching pain in both cheeks.

Iodide of potash causes inflammation of the tear-ducts and of the conjunctivæ, and this conjunctivitis may have a sinister effect while attempting to treat syphilis of the eye. Galezowski[14] says that iodide of potash in syphilis of the eye is frequently not alone no good, but may be directly harmful because of the coincident disturbing effect of this conjunctivitis on the circulation of the bulb.

Besides the conjunctivitis mentioned above, serpiginous ulcerations of the cornea with staphyloma and synechia, with transformation of the cornea into an opaque, vascular cicatrix, have been observed.[15]

An iodic pharyngitis, with pain on swallowing, and possibly a feeling of dryness and heat in the esophagus, is not infrequent, or a laryngitis with the possibility of edema glottidis may develop. This edema glottidis may cause difficulty of breathing, or even death from suffocation.

Iodide of potash may cause trachitis and bronchitis, with a hard, persistent cough and mucous expectoration, with or without blood. It may cause a feeling of oppression or smothering, or asthmatic breathing without the presence of edema of the glottis.

Iodide of potash may cause acute congestion of the lungs.[16]

Iodide of potash may cause indigestion with loss of appetite, pain in the stomach, vomiting, and nausea, or there may be, also as a symptom of irritation of the gastric mucous membrane, an abnormal appetite; even vomiting of blood has occurred. Arsenic in small doses, given with the iodide, frequently goes a long way toward relieving this indigestion. Lately, as before mentioned, Neumann has described lesions in the stomach similar to the severe tuberous ones that have been described as occurring on the skin.

Rarely disturbances occur lower down in the alimentary tract, causing diarrhea. An instance of this came under my observation, when a ten-grain dose given three times a day for sixteen days caused such a severe diarrhea that the patient looked as if suffering from a wasting disease. Iodic diarrhea is sometimes bloody.

The kidneys and the mucous membrane of the genito-urinary tract may be affected while taking iodide of potash; diuresis is frequent, and diminution or even complete suppression of urine for a day or more has been reported; albuminuria is frequent, and rarely hematuria; there may be painful urination or tenesmus with an empty bladder.

Fournier[17] says he has often seen a slight clear serous or lactescent discharge from the urethra caused by iodide of potash.

Iodide of potash is said to cause disappearance of the mammary glands and testicles. Such an event would be surprising and so contrary to common experience that the correctness of such an observation should be subjected to severe criticism before adoption. Such observations might be explained as follows: A testicle or mammary gland might become so filled up with syphilitic tissue as to retain both shape and size, and yet little or no original tissue of the gland remain. On giving the iodide of potash in such a case the syphilitic tissue would be absorbed, leaving nothing in its place, and so apparently cause the disappearance of the gland in question.

The disagreeable effects of iodide of potash on the nervous system are: Muscular weakness; tremulousness; paresthesia; formication; dulness of vision; temporary paralysis of certain muscles, as those of the lips and jaw; pains in different parts of the body; severe fleeting pains simulating those of tabes; headache; periorbital pains; neuralgia of any nerve, but most frequently of the trigeminus; rarely excitability, such as from alcohol; sleeplessness or drowsiness; a feeling of dissolution and impending death.

It is said that iodide of potash may cause periostitis, but to my knowledge there is only one case reported in support of it.[18]

The patient in this case began to suffer from pains and swelling in both right and left metatarsal bones on taking iodide of potash, and on stopping the drug the pains and swelling quickly subsided. Pain and swelling of tendons and joints are also said to be occasioned by iodide of potash.

General Disturbances Caused by Iodide of Potash.—(*a*) Chilliness; chills, and a rise of temperature; a small, greatly accelerated pulse without rise of temperature.[19] (*b*) Loss of weight, and what is called the constitutional iodism of Rilliet, are the general disturbances that may be caused by iodide of potash. The temperature may rise to 40° C.[20] The loss of weight may be extreme, simulating a severe wasting disease. The constitutional iodism of Rilliet consists of a number of symptoms: a peculiar cachectic discoloration of the skin, loss of weight and strength, a feeling of anxiety, restlessness, mental dulness, deafness, lancinating pains in the extremities, heightened tendon reflexes, a feeling of oppression in the chest, and palpitation of the heart. Death may also be caused by iodide of potash.

The Individual to Whom Iodide of Potash is Given.—Although the administration of iodide of potash is almost always accompanied by a few insignificant discomforts, such as a bad taste, slight coryza, and acne of the face or shoulders, it is wonderful how rarely the

severer disturbances are met with, and this in spite of the frequent use of the drug, both in syphilis and in a long list of other diseases.

Those patients who have any grave interference with the renal filter, those having Bright's disease, for example, are particularly susceptible to iodide of potash poisoning. Why people who apparently have perfectly sound kidneys should also show signs of poisoning is inexplicable, and is referred to some unknown peculiarity of the individual, which is called idiosyncrasy.

Those who are subject to poisoning by iodide of potash usually retain this susceptibility throughout life; and, furthermore, the individual retains permanently his own individual way of showing the poisonous effects of the drug. If he gets a bullous eruption on taking iodide of potash, he will again get a bullous eruption on again taking the iodide. If susceptibility to iodide of potash is now shown by diarrhea, the probabilities are that on taking the drug years afterward diarrhea will be produced.

Intolerance for the drug in those who have not Bright's disease may be acquired. A person may at one time be able to take it with impunity, and at another time a small dose or a few doses may cause iodism. De la Barcerie has reported a case where the most acute iodism was produced by a half-gramme dose (7½ grains) of iodide of potash. This same patient had formerly taken large doses without any trouble whatever.[21]

Comby[22] says that iodism is rare in children, and practically unknown in infants. This is hardly true, as Mackenzie[23] has reported the case of an infant who died from fatal hemorrhagic purpura after taking two and a half grains of iodide of potash, and two out of the four cases of bullous iodide eruption reported by J. Nevins Hyde[24] were infants aged seven and eight months respectively, and the other two were young individuals aged two and fifteen years respectively.

Some writers have maintained that iodide of potash, in causing toxic symptoms, acts as a whole, and not by virtue of the iodine in it, and it is a modification of this idea that has led some writers to call the symptoms of iodism "iodurism," indicating that they are caused by the iodides and not by other forms of iodine. This is not true, for usually when iodide of potash disagrees, all other forms of the drug disagree also. There are, however, exceptions to this rule, and any of the following forms may be tried: Iodide of lithium, iodide of soda, iodide of rubidium, iodide of ammonium, iodalbacid, iodol, iodoform, tincture of iodine.

The easily decomposable iodide of ammonium is said to be particularly apt to give rise to iodism, and it may here be mentioned

that many of the accidents in giving the iodides have been ascribed to impurities in the drug, and especially to the presence of free iodine. Absolutely pure salts will, however, in susceptible individuals, give rise to toxic effects.

Isidor Neumann[25] uses subcutaneously iodoform oil (iodoform 1.00, ol. ricini 15.00), or iodoform dissolved in ether, in painful bone syphilis, and also in all forms and stages of syphilis. He says his results are excellent.

Tincture of iodine in ten- to thirty-drop doses in a little wine or water has been advised for those who cannot take the iodide of potash.[26] Julian also says in the same article that iodol in 1½-grain doses, given as often as five times a day, may be used as a substitute for the iodides.

Richter[27] advises giving tincture of iodine in ten- to thirty-drop doses three times a day in cases of syphilis where the iodides are indicated. He has secured good results and has never seen iodism from this medication.

Iodalbacid, a combination of iodine with a proteid nucleus, has been recommended as a substitute for iodide of potash where there is a tendency to iodism.[28] Fifteen grains three or four times a day is a moderate dose. Norman Walker[29] speaks well of iodalbacid, and says that in his hands it has sometimes proved more useful than the ordinary iodides. I have personally no views on the drug, never having used it.

The best treatment for iodism is to cease giving the drug. The remedy is so valuable, however, that one may wish it continued in spite of its disagreeable effects, and many ways have been devised to palliate its obnoxious features. And a knowledge of these palliatives is valuable, for although they frequently do not act or act only imperfectly, yet in any particular case they may enable one to continue a medication that would otherwise be unbearable to the patient.

For the lingering, bitter, metallic taste, L. Lewin[30] recommends a mouth-wash consisting of a couple of teaspoonfuls of spiritus cochlearia in a glass of water.

Iodide of potash is best given by the mouth, and in solution. One of the best ways of prescribing it is in a saturated solution, where a drop represents a grain of the salt.[31] In this way the dose may be easily increased or diminished by ordering a greater or less number of drops. So many drops, say ten, may be prescribed to be taken in milk or Vichy water. Milk is an excellent vehicle because it hides the taste, is soothing for the stomach, and is a good diuretic. Instead of milk any of the prepared milk foods may be used. Diuresis in taking

iodide of potash is a very important feature, the object being to get the salt into the system and out of it again as speedily as possible. High dilution decreases the liability to unpleasant effects, and increases the efficiency of the drug. Diuresis may be encouraged by giving large quantities of fluid, and hot fluids are frequently better than cold. The beneficial effect of many springs seems to rest entirely on the vast quantities of hot water taken with the iodide. The relaxing effect of heat on the skin is also beneficial, not so much probably because of any great amount of the salt being thrown off by the sweat, as on account of the general relaxation of the internal organs.

Sarsaparilla as in the compound syrup of sarsaparilla, gentian as in the compound tincture of gentian, and many other flavors and bitters, are often prescribed with iodide of potash to hide its disagreeable flat taste.

It is a very general belief that small doses more readily induce iodism than large ones. This is not so. Two facts give color to this idea: first, that iodism is frequently induced by a small dose, and secondly, that a slight increase in the dose will be followed by a cessation of the iodism. Very small doses, a grain or a grain and a half, will cause iodism in susceptible people. But a great many people soon become accustomed to the drug, and a continuance of the same dose or of a slightly increased dose will not be accompanied by the same disagreeable effects as at first. Then, again, if a small dose causes iodism, a somewhat larger dose, by increasing the elimination by the kidneys, may not be accompanied by any symptoms of intoxication whatever. These facts aside, however, the larger the dose, the greater the intolerance. One of the best ways to avoid iodism is to commence with a small dose, seven or eight grains, and gradually increase.

Iodide of potash may be tolerated when given by the rectum when it cannot be taken by the mouth. It is best given in fifteen- or thirty-grain doses twice a day, dissolved in milk. Olivetti[32] even prefers to give iodide of potash by enema, and says it does not cause such severe disturbances of the chemical and motor functions of the stomach as when given by the mouth.

Sinjawsky[33] has shown that iodide of potash may be absorbed through the skin, but in such small quantities as to be of no practical use.

The subcutaneous administration is also impracticable because of the severe tearing pains and the abscess formation caused by it; so there only remains the two above mentioned routes, the mouth and the rectum.

Antidotes for Iodism.—Iodism depends on a personal peculiarity of

the patient, an idiosyncrasy, and nothing will absolutely prevent it where the tendency exists. There are some agents, however, which sometimes are capable of modifying some of the symptoms of iodism. They are belladonna, Fowler's solution, bromide of potash, morphine, salol, sulphanilic acid, bicarbonate of soda, chlorate of sodium.

Belladonna is by far the best drug to relieve the coryza-like effects of iodide of potash, and I generally give five drops of the tincture with each dose of the iodide. Any other preparation of the drug, such as atropine, may be used. It may also control some other forms of iodism, as in the case mentioned, where it prevented edematous swelling in the neighborhood of the eyes.

Fowler's solution is undoubtedly the best associate drug to use when iodide of potash causes indigestion. It is best given in one- or two-drop doses, just as one would prescribe it for indigestion. Besnier advises giving it in the proportion of one drop to each fifteen grains of iodide of potash, but it is doubtful if such a rule has any real value. It would appear that Fowler's solution at times does more than merely correct the indigestion, for Sillock[34] has reported a case where it prevented iodic purpura.

Arsenite of potash in $\frac{1}{50}$-grain doses may, of course, be given instead of liquor potassii arsenitis.

Bromide of potash has been given to prevent iodism, but usually it does not help, and only adds troubles of its own. Pagenstecher advises its association with the iodide of potash in the following way:

℞ Potassium iodide..... 20.00
Potassium bromide..... 7.50
Water..... 200.00

M. S.: Three teaspoonfuls a day; to be increased to four, five, or six teaspoonfuls.

After eight or fourteen days he substitutes iodide of sodium for the iodide of potash, in the same or even larger doses.[35]

Calomenopouls[36] has reported the case of a patient who was absolutely intolerant until ninety grains a day of sodium chlorate was given, when forty-five grains a day of iodide of potash could be administered.

Briquet[37] says that bicarbonate of sodium, eighty or ninety grains a day, will benefit the general symptoms of iodism.

For those who have skin eruptions from iodide of potash, Féré[38] recommends permanganate of potash baths as likely to bring some comfort to their misery.

Sulphanilic acid, in from forty to sixty grains a day, has been advised for the general symptoms of iodism. L. Lewin[39] does not think much can be expected either from sulphanilic acid or from bicarbonate of soda.

BIBLIOGRAPHY.

1. H. Hallopeau: *Ann. de Derm. et de Syph.*, t. ix, p. 304.

2. Audrey, quoted by Neumann: *Arch. f. Derm. u. Syph.*, Bd. xlviii.

3. H. Hallopeau: *Ann. de Derm. et de Syph.*, 1888, p. 285.

4. Fordyce, Sherwell, Dade: New York Dermatological Society, Jan. 24, 1899. *Journal of Cutaneous and Genito-Urinary Diseases*, vol. xvii, p. 277.

5. Zur Histologie der Iodakne, von S. Giovannini. *Arch. f. Derm. u. Syph.*, 1898, Bd. xlv, S. 3.

6. *Ann. de Derm. et de Syph.*, t. ii, p. 641.

7. H. Hallopeau: *Ann. de Derm. et de Syph.*, t. lx, 1888, p. 285.

8. Bradley: L'Iodisme. *Thése de Paris*, 1887. Quoted by Hallopeau: *Ann. de Derm. et de Syph.*, t. ix, 1888, p. 300.

9. J. Nevins Hyde: *Journal of Cutaneous and Genito-Urinary Diseases*, 1887. Quoted by Hallopeau, *vide supra*.

10. *Presse Médicale*, May 24, 1899, p. 243. Abstracted in *Ann. de Derm.*, etc., t. x, Nos. 8-9.

11. Zur Casuistik der Ioddermatosun, von Dr. Broes van Dort. *Zeitsch. f. Derm.*, Bd. i, S. 529.

12. Ueber eine eigenthümliche Form von Iodexanthem an der Haut und an der Schleimhaut des Magens, von Prof. Isidor Neumann. *Arch. f. Derm.*, etc., Bd. xlviii, S. 323.

13. Die Nebenwirkungen der Arzneimittel, von L. Lewin.

14. Ueber die pathogenetische Bedeutung der Recidiv bei syphilitischen Erkrankungen der Augen. u. die Mittel ihrer Verhütung, von Galesowski. *Wien. Klin. Rundsch.*, 1899, No. 31; abstracted in *Monatshefte f. Praktische Dermatologie*, Bd. xxx, No. 5.

15. H. Hallopeau: *Ann. de Derm.*, etc., t. 9, 1899, p. 287.

16. Elizabeth Bradley: L'Iodisme. *Thèse de Paris*, 1887. Cited by Fournier: Traitement de la Syphilis, p. 415.

17. Traitement de la Syphilis, p. 412.

18. C. Kopp: *Fortsch. d. Med.*, No. 16, 1886. Abstracted in *Ann. de Derm. et de Syph.*, 1886, p. 569.

19. Elizabeth Bradley: L'Iodisme. *Thèse de Paris*, 1887. Quoted by H. Hallopeau: *Ann. de Derm.*, etc., t. ix, 1888, p. 301.

20. Besides the formation of bullæ, Hallopeau observed a diarrhea and a rise of temperature to 40° C. every time his patient took iodide of potash. Sur une forme Vegetante et Atrophique de Pemphigus Iodique, par H. Hallopeau. *Ann. de Derm.*, etc., t. ix, 1888, p. 285.

21. Ein Fall von acuten Iodismus. *Therap. Monatsh.*, 1891, p. 420.

22. De L'Iode et des iodures en medicine infantile. *La Médecine Moderne*, July 10, 1895. Abstracted in *Arch. f. Derm.*, etc., Bd. xxxviii, S. 285.

23. *Medical Times and Gazette*, 1879, p. 280. Quoted by Duhring: Diseases of the Skin, second edition.

24. *Archives of Dermatology*, October, 1879, and *Journal of Cutaneous and Genito-Urinary Diseases*, December, 1886.

25. Syphilis, von Isidor Neumann, 2 aufl. Review in *Monatsh. f. Prakt. Derm.*, Bd. xxix, S. 396.

26. Julian: Intolerance pour la medication iodurée. Société Medicale de ix Arrondissement. *Jour. des Maladies Cutanées et Syph.*, 1891, p. 406. Abstracted in the *Archiv f. Derm.*, etc., xxxvi, S. 461.

27. Paul Richter: Beiträge zur Iodmedication. Festsch. f. Lewin, Nov. 5, 1895.

28. Neue Vorschlage zur Iodtherapie der Syphilis, von G. Zuelzer. *Arch. f. Derm.*, etc., Bd. xliv, S. 421.

29. An Introduction to Dermatology, p. 184.

30. Die Nebenwirkungen der Arzneimittel, von Dr. L. Lewin, 1899, S. 351.

31. To be more accurate one may prescribe equal parts by weight of iodide of potash

and water. One hundred drops of such a solution represents only eighty grains of the salt. Seguin. Quoted by Geo. T. Jackson: *New York Medical Journal*, October, 1882.

32. *Gazzetta Medica die Toreno*, No. 38, Sept. 7, 1896. Abstracted in *Arch. f. Derm.*, etc., Bd. xl, S. 380.

33. Alex. von Sinjawsky: Ueber die Permeabilität der Haut des Kaninchens f. die wäseringen Lösungen von Iodkali. Dis. Berlin, 1897. Abstracted in *Arch. f. Derm.*, etc., Bd. lxix, S. 418.

34. Sillock: *British Medical Journal*, Oct. 24, 1885. Quoted by L. Lewin: Nebenwirkungen der Arzneimittel, 1889.

35. Ueber die Anwendung von grossen Dosen Iod in der Augenheilkunde, von Prof. Dr. H. Pagenstecher. *Klinische Monatsblätter f. Augenheilkunde*, xxxv, Jahrg., p. 401. Abstracted in *Arch. f. Derm.*, etc., Bd. xlix, S. 427.

36. *Jour. des Prat.*, No. 18, p. 288, 1896. Abstracted in *Sajous' Annual.*

37. *La Semaine Médicale*, No. 18, p. 137, 1896.

38. Des moyens de combattre des eruptions bromiques et iodiques. Soc. de Biologie, Jan. 11, 1896. *La Semaine Médicale*, 1896, No. 4, p. 27.

39. Die Nebenwirkungen der Arzneimittel, 1899, p. 357.

DR. MCDONALD, of Adelaide, who has had a wide experience in the East in bubonic plague, claims to have made an important discovery. He states that if the prophylactic against the plague be swallowed, the result is as efficacious in preventing the disease as if it had been hypodermically injected, with this additional advantage, that the fever that follows injection does not ensue after swallowing the preventive. After making several experiments on animals, Dr. McDonald and a colleague swallowed a quantity of the prophylactic, with the result that they put their blood into such a splendid condition that the plague bacillus had no effect on them.

ACCORDING to an exchange, none of the personnel of the seven Red Cross ambulances sent into the haunts of malaria in Italy have contracted the disease, owing, it is supposed, to the precautions against mosquitoes. They have had occasion to treat 1772 patients, including 1329 with malaria, in their rounds through the Roman Campagna and Tuscan Maremma, where the workmen have been gathering in the harvest. The experiments instituted on three railroad lines have been equally successful in proving that protection against mosquitoes is practically synonymous with immunity against malaria in most cases.

THE Prussian government, says the *Medical Record*, has sent a circular to all practicing physicians in the kingdom, calling for answers to a series of questions bearing upon the etiology of cancer. The principal points are whether cancer is hereditary and contagious, whether it is connected with a particular habit, such as indulgence in alcohol, tobacco, etc., and whether it is more prevalent in one town or province than in another.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE HARMLESSNESS OF MODERN WARFARE.

The prediction that the destructive effects of modern weapons were becoming so great that future wars would be impossible has been falsified by the history of the last war in Africa, as it was by the Spanish-American war. Modern weapons have not been proved deadly, and the old saying of the Peninsular wars, that it took a ton of lead to kill a man, would almost be true to-day. The mortality of combatants is certainly not increased, the severity of wounds has been less, and the proportion of recoveries greater, in the most recent war than in any preceding one. Even artillery fire is proved to be not particularly deadly. The German-Boer artillery commandant Albrecht says of Paardeberg, that with 120 guns hurling tons of metal against 4000 Boers, the casualties amounted to about one for each gun. Nor was the effect of lyddite particularly dreadful. Mr. Treves says it had nothing like the effect attributed to it. Men were hindered for awhile in their breathing by the stench of the fumes, but usually recovered without injury.

The British forces in South Africa had 10,701 officers and men wounded. Of these 571 died, a mortality of 5.34 per cent. The bullets of the Lee-Metford and Mauser rifles penetrated the body in all directions without inflicting permanent injury. They often remained embedded in the tissues without causing any harm. Men were shot by these slender bullets through the chest and abdomen, and in sixty per cent of these cases they recovered without fatal hemorrhage. One Boer shot through the lung smoked his pipe comfortably the next day, and the day after went home to his wife. Nearly all abdominal cases were left to themselves, and recovered by the unaided effort of nature. Mr. Treves describes a number of cases where men shot through the abdomen suffered such trifling symptoms as "they might get from eating a green apple." The men who were shot fasting, or who were left undisturbed for some hours on the field, made the greatest number of recoveries, emphasizing the old experience that the vanquished

often make better recoveries than the conquerors. All the experience of South Africa, in fact, confirms our belief in the comparative harmlessness of cleanly perforating wounds of the viscera.

The most distressing cases now occurring in war are thought to be the injuries of the nerves. A bullet often severs an important nerve, while it inflicts no other injury. The difficulties of reuniting severed nerves, or of avoiding compression from scar tissue, are those which have perhaps baffled the resources of surgical art more than any other.

EDITORIAL NOTES.

Three Hundred Osteopaths for Two Dollars.

We have received the following letter:

S. S. Still School of Osteopathy,
Des Moines, Iowa.

Des Moines, Iowa, Oct. 6, 1900.

Medical Age, Detroit, Mich.:

Gentlemen—Would be pleased to mail you names and addresses of 300 Osteopaths in exchange for two years' subscription to your Journal. Osteopaths read many journals.

Resp.,
R. M. Jester,
408 16th St.

For pure unadulterated gall the osteopath is without a peer. He thinks he wants good reading, but not badly enough to pay for it. Now what on earth is the use of 300 osteopaths, let alone their names? We naturally look upon ourselves as the best proposition in medical journals—twenty-four numbers for one dollar; but two years' subscription for 300 osteopaths—never! It is encouraging, however, to know the osteopaths are going to read medical journals. It is even encouraging to think they know how to read. If they will read the Medical Age they will learn something, and may finally come to view the pathology of appendicitis and gonorrhea as being the result of something more than dislocated bones.

A Lively Tilt.

Dr. Geo. M. Gould, and Mr. Elbert Hubbard of Roycroft Printing Shop fame, have been having a tilt. Dr. Gould returned copies of the Roycroft editions of Walt Whitman and Rossetti, on the grounds that Whitman was an old sponge and tramp, and that Rossetti's poetry is morbid. Dr. Gould also makes a forcible objection to Hubbard's wishy-washy defense of so-called Christian science. Mr. Hubbard in turn records his unfavorable opinion of Dr. Gould as a literary critic, and reports that the Roycroft girls use the Gould books for pressing flowers or elevating the height of the piano-stool when Roycroft duets are in progress. All of which is edifying enough, but Mr. Hubbard's

work is to make books, not to pose as a perennial example of sound-mindedness. Mr. Hubbard has ruminated on moral absurdities until he has somewhat befuddled his intellect, but he is naturally a robust thinker, and his mental atmosphere will lose its mugginess and regain its normal clarity if he simply thinks the thoughts that are in him. If Mr. Hubbard's appendicitis ever rises above the wind-colic stage, he has enough good sense left to take care of himself and put himself under scientific treatment. His work gives evidence of the possession of fundamental reasoning faculties, and it is probably only the pressing demand for copy that makes the vigorous *Philistine* descend now and then to blow off those ebullitions of attenuated veracity which have lately been its characteristic.

The Sanitarium Treatment of Tuberculosis.

A noted French physician, discussing the merits of the sanitarium treatment of tuberculosis, comes to some conclusions which are in favor of what he terms "home sanitarium" treatment. The sanitarium treatment he considers open to certain strictures. The gathering together of from one to two hundred tuberculous subjects in one building, however large and however well ventilated, and in one sun parlor, which must be sheltered from the wind, is an objectionable thing from the point of view of purity of atmosphere. The dangers of compact agglomeration are considerable, taking into consideration the experiments of Pfluger, which proved that the consumptive in speaking and coughing created around him a bacillus-laden atmosphere, which was not entirely obviated by the destruction of the microbes from the spittoon. The "home sanitarium" method consists in occupying a villa or house where discipline can be observed, but where the patient is still in his own home. One of the greatest dangers in the sanitarium treatment the author considers a moral one, due to the segregation of the sexually hyperexcited.

The Mosquito and Malaria.

Dr. Patrick Manson, whose contributions to the etiology of malaria are widely known, has, with his son, been playing the part of Abraham and Isaac. Dr. Manson's son was, for the purpose of verification of the mosquito theory, bitten by three batches of Anopheles sent in cages to London from Italy. The first and second instalments of the extra-corporeal host did not seem effective, but from a feeding of a batch of mosquitoes during the second week in September, young Manson, on September 13, showed the symptoms of malarial infection. On September 17 the parasites were found in his blood. This experiment has been verified by other observers, and is the most conclusive test yet accomplished.

ITEMS AND NOTES.

THE plague still lingers in Glasgow.

THE plague in Japan has been practically stamped out.

RECENT reports show a very satisfactory condition of health in Santiago.

THE Post-Graduate Medical School of Chicago has raised its capital stock from $20,000 to $40,000.

THE hospital ship *Solace* has arrived at San Francisco from Yokohama, bringing seventeen sick and wounded.

THE total number of bathers at the public baths in Boston for the months of June, July, and August was 1,950,000.

THE Russian medical service in China is reported to have been better than that of any other European nation.

A PHYSICIAN in Brooklyn nearly lost his life a short time ago while attempting to save his diploma from his burning residence.

THE Maharaja of Jaipur has given fifteen lakhs of rupees, equivalent to $500,000, toward an "Indian People's Famine Trust."

PROF. THEODORE ESCHERICH has been elected dean of the medical faculty of the University of Graz for the academic year 1900–1901.

THE Sanatorium at St. Mary's Hospital, Tucson, Arizona, will soon be ready for occupancy. It contains twenty-four rooms, and has cost about $25,000.

THE nineteenth session of the dental department of the University of California will be held in the new building provided by the State in San Francisco.

DR. JAMES MUSGROVE has been appointed the first professor to the new chair of anatomy established and endowed by the Marquis of Bute, of St. Andrews' University.

OWING to the fact that so much of the income of an Italian medical man is derived from foreigners, most of the students now learn to speak English and German.

THE plague in Glasgow is said to have originated at the wake of a woman who died of pneumonia. Pneumonia is one of the effective disguises of bubonic plague.

THE government of Queensland, Australia, has engaged Dr. Maxwell, the famous sugar expert of Honolulu, for five years' service on the Food Commission, at a salary of $20,000 a year.

LANGDON MITCHELL'S dramatization of Dr. S. Weir Mitchell's novel, "The Adventures of Francois," had its initial performance at the Park Theater, Philadelphia, on the evening of October 6.

AN epidemic of typhoid fever has broken out in the State Custodial Asylum for Feeble-minded Women at Syracuse, New York, and twelve persons are down with the fever, including the resident physician.

A CHAIR of hygiene and bacteriology has been established in the University of Athens. Dr. Savas, formerly staff surgeon of the Greek army, has been appointed professor and director of the Hygienic Institute.

IT is stated that there are 30,000 lepers in the Philippines. It is believed that the disease was introduced in 1633 by a vessel from Japan, which brought 150 lepers to be placed under the care of the Catholic priests.

ROOSEVELT HOSPITAL, New York, has just been provided with two electric automobile ambulances, each costing nearly $3000. The New York and Presbyterian hospitals will soon be equipped with similar ambulances.

DR. DE MONTBRUN, consul for Portugal and Brazil in Trinidad, British West Indies, has had conferred on him by the King of Portugal the honor of "Knighthood of the Royal Military Order of Our Lord Jesus Christ."

TWENTY THOUSAND DOLLARS has been agreed upon as an appropriation by the Canadian National Sanatorium Association for the erection and equipment of a free sanatorium for the treatment of tuberculosis in Toronto, Canada.

THE Forum of Tuberculosis, Climatology, and Hydrology will meet in Chicago in November, 1900, for the study and consideration of all matters relative to tuberculosis, and of the therapeutic effects of the various springs and mineral waters of the continent.

THE University of Aberdeen was recently the recipient of a gift of the botanic garden at Chanoury, Old Aberdeen, comprising six acres, and capable of accommodating nearly 6000 specimens. It was donated by Miss Cruickshank, in memory of her brother, Dr. Alexander Cruickshank.

In his address to the thirty-seventh annual convention of the American Veterinary Medical Association, held at Detroit, Mich., Dr. Leonard Pearson, of Philadelphia, urged that the efforts of all the members be concentrated during the ensuing year on the securing of commissions for veterinarians in the regular army.

Dr. Wm. N. Berkley, of New York, is now conducting experiments on a man who is in Bellevue Hospital suffering from a severe form of malaria. This man permitted a number of mosquitoes to draw blood from him, and thus contributed his mite to the cause of science. Dr. Berkley has spent considerable time studying the relation of mosquitoes to malaria.

According to the *British Medical Journal*, the Sanitary Council of Constantinople has enjoined all persons to wear shoes or other covering for their feet. The reason assigned for this ordinance is that if persons who go barefoot happen to have scratches or excoriations on these extremities, they may thereby become infected with plague, and so transmit the disease.

The Jefferson Medical College, Philadelphia, according to the will of the late Dr. J. M. Da Costa, formerly professor of the practice of medicine and of clinical medicine in that institution, has been left the sum of $5000; $5000 has been left to the Children's Hospital; $5000 to the College of Physicians and Surgeons of Philadelphia for the endowment of a publication fund; $5000 to the University of Pennsylvania for the professors' retiring fund. His medical library is bequeathed to the College of Physicians of Philadelphia.

The United States Consul at Mainz has, according to the *Philadelphia Medical Journal*, called the attention of the State Department to the danger to the health of persons using silver-mounted glasses and porcelain wares. Certain kinds of silver-mounted glass and porcelain ware, such as cups, glasses, jars, vases, etc., have been placed upon the market. The silver on these articles, he says, is applied by means of a galvanoplastic process in baths which contain large quantities of potassium cyanide. As glazed wares have innumerable hair-like cracks, this poison enters these cracks, and the articles become a severe menace to the health of anybody using or handling them, and especially as it is impossible in the course of manufacture to remove this poisonous residuum. Only a short time ago a very severe case of poisoning resulted from the use of such ware. These goods are chiefly exported to the United States from Frankfort, Berlin, and Stuttgart.

NEW PUBLICATIONS.

DISEASES OF THE NOSE AND THROAT.

The author of this work is well known to the medical profession as an earnest thinker and indefatigable worker in his selected specialty. He has produced a book which is almost irreproachable as a careful and well prepared digest of the main facts of disease as it affects the nose and throat. The author has devoted especial care to the preparation of his remarks on the etiology of the various diseases affecting the air-passages. In this respect his comments upon diphtheria will be found full of interest, discussing very fully the nature of the intrinsic pathology of the disease. His remarks on syphilis are similarly modern in tone and spirit. In his discussion of tuberculosis as it affects the tonsils and larynx, the author apparently does not find himself in complete accord with modern doctrine, and doubting the inherent pathogenic nature of the bacillus tuberculosis, he questions whether tuberculosis is communicable. He says: "What is needed to clear up this question is a knowledge of the number of instances of potent exposure that have not resulted in the acquirement of the disease." This is certainly a unique demand. Why do not the instances of "potent exposure" that have resulted in infection also count for something? Why does not such a fact amount to presumptive evidence, as that stated by Devoto, that in the hospitals of Genoa about twenty per cent of the nurses die of tuberculosis, while in those hospitals receiving no tubercular cases the percentage of deaths is practically nothing? In fact, all the author's remarks on tuberculosis possess the inevitable indirectness of one struggling to maintain the *via media* in the face of foregone conclusions.

The profession will hail with satisfaction the admirable series of cuts illustrating the technique of intubation. These are better than any which have yet appeared. It is to be regretted that the author should give his written sanction to the antiquated method of laryngeal application by means of camel's-hair brushes when so many clever devices have in latter years been invented for this purpose. Safety appears to be the author's justification, but the dangers of infection fully offset this advantage.

The work can only be affirmed a literary and scientific success. Its subject-matter is admirably presented to the reader. The text is amply elucidated by a large number of cuts and colored plates, and while fully meeting the needs of the student, the profession will find this manual one to which it can at all times resort with profit whenever seeking information upon the subject with which it deals.

A Treatise on Diseases of the Nose and Throat. By Ernest L. Shurly, M.D. Illustrated. New York: D. Appleton & Co., 1900.

THE LAW IN ITS RELATIONS TO PHYSICIANS.

The author of this work presents a very useful compendium of the law as it affects physicians. Not only is the physician apt to be misinformed regarding his legal rights and liabilities, but in some cases he may infringe the law unconsciously. This work places before every physician a systematic knowledge of those questions of law which present themselves in his ordinary work, and which he may at any moment be required to know. It is a very excellent condensation, and is written in a clear and interesting style. It may be commended to every physician for his attention.

The Law in its Relations to Physicians. By Arthur N. Taylor, LL.B., of the New York Bar. New York: D. Appleton & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

The Medicolegal Relations of the X-rays.

The routine employment of the *x*-ray in cases of fracture, says J. W. White (*American Journal of Surgery and Gynecology*, September, 1900), is not at present of sufficient definite advantage to justify the teaching that it should be used in every case. If the surgeon is in doubt as to his diagnosis, he should make use of this as of every other available means to add to his knowledge of the case, but even then he should not forget the grave possibilities of misinterpretation. There is evidence that in competent hands plates may be made that will fail to reveal the presence of existing fractures, or will appear to show a fracture that does not exist.

In the regions of the base of the skull, the spine, the pelvis, and the hips, the *x*-ray results have not as yet been thoroughly satisfactory, although good skiagraphs have been made of lesions in the last three localities. On account of the rarity of such skiagraphs of these parts, special caution should be observed, when they are affected, in basing upon *x*-ray testimony any important diagnosis or line of treatment.

As to questions of deformity, skiagraphs alone, without expert surgical interpretation, are generally useless and frequently misleading. The appearance of deformity may be produced in any normal bone, and existing deformity may be grossly exaggerated.

It is not possible to distinguish after recent fractures between cases in which perfectly satisfactory callus has formed and cases which will go on to non-union. Neither can fibrous union be distinguished from union by callus in which lime salts have not yet been deposited. There is abundant evidence to show that the use of the *x*-ray in these cases should be regarded as merely the adjunct to other surgical methods, and that its testimony is especially fallible.

The evidence as to *x*-ray burns seems to show that in the majority of cases they are easily and certainly preventable. The essential cause is still a matter of dispute. It seems not unlikely, when the strange susceptibilities due to idiosyncrasy are remembered, that in a small number of cases it may make a given individual especially liable to this form of injury.

In the recognition of foreign bodies the skiagraph is of the very

greatest value; in their localization it has occasionally failed. The mistakes recorded in the former case should easily have been avoided; in the latter they are becoming less and less frequent, and by the employment of accurate mathematical methods can probably in time be eliminated. In the meanwhile, however, the surgeon who bases an important operation on the localization of a foreign body buried in the tissues should remember the possibility of error that still exists.

It has not seemed worth while to attempt a review of the situation from the strictly legal standpoint. It would vary in different States and with different judges to interpret the law. The evidence shows, however, that in many places and under many differing circumstances the skiagraph will undoubtedly be a factor in medicolegal cases.

The technicalities of its production, the manipulation of the apparatus, etc., are already in the hands of specialists, and with that subject also it has not seemed worth while to deal. But it is earnestly recommended that the surgeon should so familiarize himself with the appearance of skiagraphs, with their distortions, with the relative values of their shadows and outlines, as to be himself the judge of their teachings, and not depend upon the interpretation of others who may lack the wide experience with surgical injury and disease necessary for the correct reading of these pictures.

Diagnosis of Pott's Disease.

M. Sireday, at a recent meeting of the Paris Academy of Medicine (*Medical Press*, Sept. 26, 1900), read a paper on the above malady, in which he said that in the adult the evolution of Pott's disease is slow, insidious, and gives rise to certain symptoms which sometimes and for a long time are attributed to some other affection. As in the child, the morbid changes in the vertebræ are the first apparent manifestation of the tuberculous nature of the disease. The bacillary lesions show themselves ordinarily under the form of small circumscribed spots on the apophyses of one or more vertebræ without compromising the solidity of the column. It is thus that the characteristic deformity is frequently wanting.

The formation of erosions in the external surface of the vertebræ provokes the elimination of small caseous masses and drops of pus, which are enclosed in a thick fibrous sheath, similar to that found in the neighborhood of the dura mater, when the same changes are produced in the interior of the rachidian canal.

As long as the abscesses remain small they adhere to the vertebral column, surrounded by false membrane, and form irregular nodules, like the drops of wax down the sides of a candle. The false mem-

brane, adhering intimately to the neighboring tissues, compresses the rachidian nerves, producing neuritis, manifested by intense pain and different motor and trophic troubles.

In extending far beyond the vertebral lesions, the condensation of the cellular tissue provokes sharp pains, which are frequently attributed to lesions of the neighboring organs.

It is thus that when the neuralgic pains correspond to the thorax, they simulate more or less those characteristic of pleural effusion, pulmonary congestion, pericarditis, aneurism of the aorta, and when at the base of the thorax they are frequently attributed to ulcer of the stomach, while if they are felt over the last ribs a renal affection is diagnosed.

Naturally a careful observer would eliminate one by one all of those affections, but he would rarely think of examining the spine. Yet in spite of the difficulty of the situation it is possible to arrive at a correct diagnosis. The persistence, intensity, and the fixed position of the neuralgia, its resistance to therapeutic measures, the progressive extension of the painful phenomena to new nerve branches in the transversal, and, above all, in the vertical sense, the exaggeration of the tendinous reflexes of the side affected, constitute an *ensemble* of presumptions in favor of a rachidian lesion. A minute examination of the vertebral column will reveal more or less clearly a constant pain at a fixed point over the spinous or transverse apophyses, or of the body of one or more vertebræ, and frequently the immobility of certain vertebræ when the body is flexed or extended in an antero-posterior or lateral sense.

Tuberculous Lesions from a Clinical Point of View.

Chronic inflammation of a joint in a child or young person, says E. Owen (*British Medical Journal*, Sept. 15, 1900), is always tuberculous, except in those very rare cases in which it is due to hereditary syphilis or osteoarthritis.

Tuberculous inflammation may completely destroy a joint, and then leave it solidly and soundly synostosed, without the surrounding tissues or the skin having been implicated.

If tuberculous granulation tissue breaks down into a fluid, that fluid is not pus, and the collection is not, properly speaking, an abscess—unless, by bad fortune, or by worse surgery, it has become infected by septic microorganisms.

The fluid collection is not to be treated as an abscess—that is, by incision and drainage—but is to be opened and emptied, and scraped and cleansed of its unhealthy lining of granulation tissue. Then the wound in the skin is to be completely closed by sutures, firm pressure

is to be evenly applied, and the part is to be kept absolutely at rest. The success attending this line of treatment leaves, as a rule, little to be desired, or that for this important advance in practical surgery we are chiefly indebted to the patient researches of our friends with the smock-frocks and guinea-pigs.

"I have," says the writer, "failed to discover that iodoform is of any peculiar value in the treatment of tuberculous lesions. At any rate I have long since discarded it, and I have not noticed any falling off in the results of my practice in consequence. Iodoform is an irritant and a poison; it is apt to be septic, as germs can grow upon it."

Asepsis of the Surgeon's Hands.

Kossman, of Berlin (*Rev. Méd.*, Montreal, Aug. 29, 1900), recommends "chirol," a solution of certain resins and oils in a mixture of ether and alcohol. The hands, previously sterilized, are dipped into this fluid, which in two to three minutes dries by evaporation, leaving them covered with a flexible and aseptic film which allows of repeated washing in a five-per-cent formaldehyde solution.

Mariau (*Bull. Soc. Cent. Méd.*) is very partial to Socknee's No. 3 picture varnish, which he finds aseptic, a quick drier, transparent, hydrofuge, and perfectly flexible and elastic.

Both of these applications are easily removed by washing with alcohol.

Levai, of Budapest, has experimented with the following mixture, which he finds better even than chirol or any of the usual varnishes: Two parts (by weight) of copal resin and Venice turpentine are dissolved by gentle heat, and then heated until all water and essential oil are eliminated. After cooling, the mixture is dissolved in one hundred parts of sulphuric ether, to which is later added one hundred parts of collodion, and in order to clarify the mixture, eight parts of acetone. This varnish can be removed in a few seconds with a cloth dipped in two parts of ether to one of alcohol.

A New Method of Treating Varicose Ulcers of the Leg.

Bardescu (*Centralblatt für Chirurgie*, No. 28, 1899) reports two cases of chronic indolent and indurated ulcer of the leg which were cured by section of the internal saphenous vein and the stretching of the perineal nerve. Local anesthesia resulted in the area supplied by the nerve, which was followed by absorption of the induration and a healthy ulcer, and even by firm scar tissue. A case with ulcers on both legs, which had resisted other methods of treatment for some

years, became cicatrized in twenty-seven days from the above method of treatment. The portion of nerve stretched is dependent upon the site of ulceration.

MEDICINE.

Diabetes Insipidus.

In the *Berliner Klinische Wochenschrift*, No. 30, 1900, Dr. H. Regensburg gives an account of some recent observations on this rare affection. As a proof of its rarity he mentions that out of 113,600 patients seen at the Charité, there were only fifty-five cases of diabetes insipidus. Both the cases observed by the writer were youthful, fifteen and twenty years of age respectively. Both patients had suffered from injury to the head, but in both the injury was slight and inflicted a long time before the cases came under observation, or symptoms of the disease displayed themselves. No symptoms pointing to any cerebral affection were ever observed in them. There was no trace of heredity, nor had relatives of either ever suffered from diabetes mellitus. In both cases the polyuria was the first symptom, polydipsia following. The most remarkable feature of the cases was the arrest of development that went hand in hand with the disease. The patient aged twenty had the appearance of a boy of only twelve. The most distressing symptom was the absence of the normal perspiration. Both on exertion felt an "internal heat" and great weakness, which was only relieved by drinking a large quantity of water. Want of appetite characterized both cases, but whether that was due to catarrh of the stomach set up by drinking large quantities of water, the writer could not say. There was no blood disease in either patient.

As regarded treatment, one case only afforded indication, as the second was only under treatment for three weeks. After a sweating bath the quantity of urine diminished, and also after moderate limitation of the quantity of fluid imbibed. An injection of pilocarpine was made, which was followed by excessive salivation, sickness, vomiting, and loss of appetite for several days. There was also slight sweating from the lower extremities. The sweating was of such evident comfort to the patient that the pilocarpine was repeated after a few weeks' interval. The skin was treated with frequent warm baths, sometimes with the addition of salt and cold rubbings. On attempting to reduce the quantity of water drunk there was great weakness and loss of appetite, so that the attempt was abandoned. With free living in the open air as much as possible, and moderate restriction of liquids, the weight

was increased four kilogrammes in five and a half months. As to drugs, almost all that have been mentioned in connection with the disease were tried, but without any special result. In order to relieve the stomach injections of water per rectum were made (half a liter twice daily), and the author believes these really did good, possibly from the fact that food was better taken when the stomach was not so constantly occupied in getting rid of mere water.

Serum Globulin and Diphtheritic Antitoxin—A Comparative Study of the Amount of Globulin in Normal and Antitoxic Sera, and the Relation of the Globulins to the Antitoxic Bodies.

According to the researches made by P. H. Hiss and J. P. Atkinson (*Journal of Experimental Medicine*, October, 1900), the amount of antitoxic substance obtained by precipitation with magnesium sulphate from the blood-serum of the horse corresponds, as nearly as can be determined by the test of guinea-pigs, in full to the protective power of the serum from which it is obtained—*i.e.*, the precipitate from one cubic centimeter of serum will protect against the same amount of toxin as one cubic centimeter of the serum itself.

Equal amounts of the precipitates by magnesium sulphate from immunized and non-immunized horses act differently toward toxin—*i.e.*, the proportion of protective substance to the precipitate from non-immunized serum is exceedingly small as compared with the proportion of antitoxin to the precipitate from sera of immunized horses.

The average precipitate from the sera of immunized horses, as obtained by magnesium sulphate, is more abundant than the average precipitate from sera of non-immunized horses.

In the case of the same animal before and after immunization, the serum before immunization gives a less abundant precipitate with magnesium sulphate than the serum tested after immunization.

The proportion of increase per unit of antitoxic strength for the same or different horses is not constant. This may be due to an increase of inactive substances (in their relation to diphtheria toxin) or to imperfect methods of determination.

The precipitates obtained by magnesium sulphate give all the reactions recognized as characteristic of globulins, and as distinguishing them from other albuminous bodies. We are not warranted, in the present state of our knowledge, in considering any part of these precipitates as other than globulin. But it does seem warrantable to conclude, from the fact that the globulins of normal serum do not protect, or only in comparatively large amounts, against diphtheria

toxin, that new globulins are formed, or rather greatly increased, in the serum of immunized horses, and that these globulins protect against the toxin. These increased globulins and the inert globulins (which from obvious causes are a very variable factor) are both precipitated by magnesium sulphate.

Every animal has a physiological and pathological history more or less widely diverging from the normal, hence absolute conformity in the results obtained is not to be expected, at least with our present methods of differentiation.

An Experimental Study of Oxaluria, with Special Reference to its Fermentative Origin.

From a series of experiments upon lower animals, and from a careful study of the subject, H. Baldwin (*Journal of Experimental Medicine*, October, 1900) has reached the following conclusions:

1. As varying amounts of calcium oxalate may be held in solution in the urine, conclusions based upon the presence or number of calcium oxalate crystals found therein are of no real value as an indication of the quantity of oxalic acid present.

2. Unless the utmost care is exercised, the results obtained by quantitative estimation of oxalic acid are subject to large percentages of error. This is especially true in the use of Neubauer's or Schultsen's methods, in which the calcium oxalate is precipitated in an alkaline solution.

3. An ordinary mixed diet regularly contains traces of oxalic acid or its salts.

4. A portion of the oxalic acid ingested with the food may be absorbed and reappear unchanged in the urine.

5. The normal daily excretion of oxalic acid in the urine fluctuates with the amount taken in the food, and varies from a few milligrammes to two or three centigrammes, being usually below ten milligrammes.

6. In health no oxalic acid, or only a trace, is formed in the body, but that present in the urine has been ingested with the food.

7. In certain clinical disturbances which in some cases were associated with absence of free hydrochloric acid from the gastric juice, oxalic acid is formed in the organism.

8. This formation in the organism is connected with fermentative activity in the alimentary canal.

(*a*) The prolonged feeding of dogs with excessive quantities of glucose, together with meat, leads eventually to a state of oxaluria.

(*b*) This experimental oxaluria is associated with a mucous gas-

tritis, and with absence of free hydrochloric acid in the gastric contents.

(*c*) The oxaluria and the accompanying gastritis are referable to fermentation induced by the excessive feeding with sugar.

(*d*) The experimental gastritis from fermentation is associated with the formation of oxalic acid in the gastric contents.

9. The symptoms attributed to an oxalic acid diathesis, with the exception of those due to local irritation in the genito-urinary tract, do not appear to be due to the presence in the system of soluble oxalates, but are more likely to depend on other products of fermentation and putrefaction.

THERAPEUTICS.

Ferropyrine as a Hemostatic.

Dr. Braila (*Medical Press*, Sept. 9, 1900) has just published the result of his experiences with ferropyrine. In consequence of recommendations by various practitioners—Hedderich, Cubasch, Frohmann, and others—he has been induced to give it an extensive trial. He has used it in epistaxis, cuts from wounds, after ritual circumcision where other substances had failed to arrest hemorrhage, and in most cases with complete satisfaction. In six of the latter class of cases the hemorrhage had lasted for hours; the most varied hemostatics had been applied by other medical men without avail, when the bleeding was promptly arrested by the ferropyrine. Uterine hemorrhages, however, afforded the largest field for its employment. It was used for hemorrhage in puerpery in four cases, after abortion in eighteen, in endometritis in twenty, in profuse menstruation in nineteen, in fibromyoma in three, and in carcinoma of the cervix once. In the sixty-five cases in which it was used topically it answered expectation in fifty-nine. It failed in one case of puerpery, three cases of abortion, one of endometritis, and one of fibromyoma. It is not to be expected that it will remove the cause of the hemorrhage, but the author claims that for the purpose of checking the symptom "hemorrhage" it is admirably adapted. In the gynecological cases it was used in a fifteen- to twenty-per-cent solution by means of a syringe. In some cases pain was caused, and for this reason it is well to inject only a small quantity of the solution at a time. In cases where the hemorrhage threatens to be dangerous the other internal and external appliances for arrest should not be omitted. The author gives a short history of three cases in which its employment was followed by happy results.

Ferropyrine, as is known, is a double combination of iron chloride and antipyrin, and it is used both internally and locally. When used externally it may be employed pure, sprinkled on lint, as it has no caustic action, or in fifteen- to twenty-per-cent solution for hemorrhage from the mouth, throat, or vagina. For internal use the dose is seven grains or under dissolved in distilled water and flavored at pleasure.

The author adds that on the recommendation of Dagle he has employed it with success internally in cases of cephalalgia and neuralgia of chlorosis and anemia. In these cases the dose was small and given after each meal.

Extract of Suprarenal Capsules in the Treatment of Rachitis.

W. Stoeltzner (*Jahrbuch für Kinderheilkunde*, 1900, Bd. i, S. 73 and 199) has, from his studies in the use of suprarenal extract in this affection, reached the following conclusions:

1. Suprarenal extract exercises a very favorable action upon the general state, the agitation, the perspiration, the vasomotor excitability, and especially the craniotabes of rachitic infants. All these symptoms are often considerably ameliorated within eight to fifteen days.

2. Children thus treated rapidly become able to walk, to run, and to sit upright; the softness of the bones of the thorax disappears very rapidly, and the delayed teeth begin to appear.

3. The dimensions of the fontanels, the deformity of the thorax, the costal rosary, the epiphyseal swellings, and the deformity of the limbs, are little influenced.

4. Spasm of the glottis almost always resists this treatment.

5. The amelioration of all the symptoms is especially manifest during the first eight days of treatment; later it is much less rapid.

6. If the treatment be interrupted improvement ceases, or there is actually an aggravation of the condition, which yields when the treatment is begun anew.

7. Even in cases complicated by syphilis, enteritis, bronchitis, or bronchopneumonia, treatment by suprarenal extract produces considerable amelioration of the rachitis.

8. In a case of grave rachitis treated by suprarenal extract, in which death was caused by a capillary bronchitis, the histological examination of the bones showed that there were no traces of osteoid tissue, and that even the periosteal osteophytes gave an almost complete reaction of calcified osseous tissue.

Chloride of Iron in Ulcer of the Stomach.

Bourget (*Münch. Med. Woch.*, Aug. 21, 1900, p. 1191) is very partial to the use of chloride of iron solution in the treatment of gastric ulcer. After preliminary lavage, portions varying from 100 to 150 cubic centimeters of a two-per-cent solution of chloride of iron are introduced at one sitting, each portion being removed by expression. After one liter of solution has been introduced, from 50 to 60 cubic centimeters is left in the viscus for five minutes, during which the patient remains in abdominal decubitus. The solution remaining in the stomach is then precipitated by means of a glassful of a warm two-per-cent solution of sodium bicarbonate.

The process is repeated daily during five days. Should hematemesis occur, the lavage is to be forthwith repeated.

Bourget recommends a rice and milk diet (fifty grammes of rice boiled during several hours in one liter of milk and evaporated on the water-bath to the consistency of a thick mush, exhibited at first without sugar, and later on with sugar or salt).

Alkaline preparations are of absolute necessity and should be regulated with reference to the total amount of hydrochloric acid remaining in the stomach after digestion. They should be given in solution, warm, and not above three per cent, from two to three times a day after meals.

Arsenic in Malignant Tumors.

Trunecyek, of Prague (*Medical Press*, Sept. 15, 1900), has brought forward the old treatment of arsenic in malignancy under a new guise. According to his method the growth must be painted over with a solution of arsenious acid in alcohol—40 to 75 parts of the latter. The transformation is marked in a very short space of time by healthy granulations, and healing soon appears. This form of treatment, under the designation of the Czerny-Trunecyek method, is practiced in ulcerating sarcoma. When the growth is not too large, or the patient not too much debilitated, perfect recovery can be promised. He records the case of a female who had suffered from a sarcoma of the skin for twenty-four years, and after eighteen months' treatment was perfectly cured.

In following the transitions the first change observed is an anemic condition of the superficial tissue, which cannot be distinguished from the normal beyond being bloodless; deep incisions only let out a serous fluid which oozes out slowly. Subsequently the growth gradually hardens till it is even difficult to cut, and finally necroses, lying as a hard foreign body which can be easily removed.

Chloroanemia.

The following prescription is a favorite with Viennese practitioners because of its prompt efficiency:

Artemisine	1 milligramme.
Quassine, cryst	1 milligramme.
Iron protoxalate	10 centigrammes.

M. For one capsule. S.: Four a day, before meals.

Beneficial results invariably follow within from nine to twelve days.

The combination of artemisine with quassine (crystals) has a powerful tonic influence upon intestinal peristalsis, hence an almost immediate increase of appetite.—*Progrès Médical*, Sept. 8, 1900, p. 165.

Cure of a Case of Hypertrophic Alcoholic Cirrhosis of the Liver.

M. Luzzatto (*Medical Record*, Sept. 29, 1900) reports a true case of hypertrophic cirrhosis of the liver due to alcoholism in a man fifty-five years of age, who was entirely cured with milk, potassium iodide, and diuretics. The writer says the cure probably depended upon the regeneration of the damaged cells of the liver. He also states that alcoholism is by no means the only cause of cirrhosis of the liver, and that alcoholic cirrhosis of the liver is curable; the hypertrophic form more often, but the atrophic form also.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Hot air Douches in Rhinological Practice.

Lermoyez and Mahu (Thirteenth International Congress of Medicine, in *Rev. Hebd. de Laryngol., d'Otol. et de Rhinol.*, Sept. 8, 1900) report a new method of treatment of nasal or nasopharyngeal diseases by the use of hot air. A special apparatus allows of projecting upon various parts of the nasal mucosa a blast of dry air which has been heated to from 176° to 212° F. The application, which is made under the control of the eye, is prolonged for about two minutes, and repeated from two to three times a week. From eight to twelve treatments are required to produce lasting result. The hot-air douche at first produces an energetic retraction of the mucous membrane under treatment, which is soon followed by a copious watery discharge of short duration. Improvement quickly follows, temporary at first, but soon of a permanent nature.

The authors report excellent results from this treatment in chronic

congestive coryza with intermittent nasal obstruction. The sneezing and other nervous symptoms of spasmodic coryza and the discharge of hydrorrhea soon disappear, while the nasal mucous membrane undergoes beneficial modification. The douches seem to relieve the spasmodic spells of hay-fever, prove beneficial in the auricular disturbances, deafness, and buzzing due to nasal or nasopharyngeal catarrh, and afford almost immediate relief in otalgia. On the other hand, they have proved useless in cases of ozena, in purulent nasal catarrh, in lupus, in hypertrophic rhinitis, and in all cases of nasal or nasopharyngeal disturbance amenable to surgical interference.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Eye Affections in Bright's Disease.

Thomas R. Pooley (*Medical Review of Reviews*, Sept. 25, 1900) considers the different forms of ocular changes associated with Bright's disease. He claims, truthfully, that one seldom, if ever, sees cases in all the details described as typical albuminuric retinitis in all the text-books. He accepts Prof. James Schoebel's (of Prague) classification of seven different forms of ocular changes as the best.

Sudden loss of vision is to be attributed to uremic poisoning. Cases of nephritic retinitis seldom produce complete blindness.

As regards the percentage of cases of ocular lesions appearing in Bright's disease, he points out the great difference of opinion which exists on this question, from Galezowski's claim of thirty-three per cent to Schuriger's six to seven per cent. The author believes it happens in about ten per cent of the cases.

The prognosis of albuminuric retinitis is always most unfavorable as regards the life of the patient. Death is almost certain to occur in a few months or a few years. Blindness almost never results. It is thus seen that the retinal disease becomes of a graver prognosis for life than it does for vision.

The author emphasizes the importance and propriety of inducing premature labor in cases in which albuminuric retinitis occurs in the earlier periods of pregnancy.

In conclusion, he pleads with those engaged in general practice to recognize the great importance of the aid which the use of the ophthalmoscope gives in diagnosis, and to urge them to add it to the methods of examination.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,
Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Organotherapy in Gynecological Therapeutics.

H. P. Jack (*International Journal of Surgery*, October, 1900) cites a number of gynecological cases in which he has used some of the various animal extracts, and from his experiments and from his study of the literature of the subject, he has drawn the following conclusions:

1. Thyroid extract is one of our most reliable vasoconstrictors, and as far as its gynecological application is concerned, should be limited to hemorrhages, and those especially in which the epithelial elements of the endometrium are concerned.

2. Mammary extract controls the hemorrhages from fibromas, reduces the size of the tumors, and in some cases causes their disappearance, and should be preferred to the thyroid extract, which does the same thing, in treating fibromas.

3. Parotid extract is the best remedy yet brought out in the treatment of dysmenorrhea, relieving as it does the aches and pains of ovaritis and improving nutrition. Pelvic exudates soften and are often absorbed. Menstruation becomes regular and less in amount when excessive and shorter in duration. The headaches and nervousness so often accompanying these cases are as a rule cured, health and spirits revive, and, indeed, its action here can be denominated nothing less than specific.

4. Ovarian extract is indicated in all cases of menopausal nervous symptoms, or when for any reason it is desirable to increase the flow from the uterus. It is now known almost beyond doubt that the ovary has, besides its function of ovulation, another almost as important, that of internal secretion, and that, like the thyroid, it secretes an active oxidizing agent, spermin, that aids in the metabolism of the blood. Marked decrease in the elimination of phosphates has been observed after ovariotomy.

Cervical Endometritis.

Pozzi (Transactions Thirteenth International Congress of Medical Science, in *Rev. de Thér.*, Sept. 1, 1900) draws the following conclusions:

1. Acute or chronic endocervicitis may persist a long time without involving the uterine structures.

2. However acute, inflammations of the cervical mucous membrane readily propagate to the uterine mucosa, while chronic inflammatory conditions of the cervical parenchyma (sclerous or sclerocystic degeneration), whether partial or total, prompt by influence the nutrition and anatomical structure of the whole uterine organ.

3. Trachelorrhaphy is inferior to biconical resection of the cervix modified to suit individual cases, and should be rejected.

4. A large number of subacute, acute, and chronic inflammations of the cervical mucous membrane in nulliparæ are due to narrowing of the external os and to the consequent imperfect drainage. The main indication of treatment in such cases is to secure, by surgical means, a permanent patulence of the cervical canal.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

On Seborrhea and its Results.

In an article read before the Dermatological Society of Great Britain and Ireland, May 24, 1900, reported in the *British Journal of Dermatology* for August, 1900, Dr. William Anderson, F.R C.S., submits the following propositions:

First, that seborrhœa oleosa is a physiological irregularity consistent with good health, but favoring skin infections by retaining pathogenic organisms accidentally brought into contact with the surface by the air or otherwise, and by affording a medium for their cultivation.

Secondly, that what we may call "coronal baldness" is neither seborrheic nor parasitic in origin, and that the associated hypertrophy of the sebaceous glands demonstrated by Sabouraud is rather a consequence than a cause of hair atrophy.

Thirdly, that alopecia areata, though associated with gland hypertrophy, and almost undoubtedly of microbic origin, cannot be linked pathologically with coronal baldness, and has no essential connection with seborrhœa oleosa.

Fourthly, that seborrhœa sicca is a non-inflammatory disease, usually, if not always, associated with seborrhœa oleosa; that it is parasitic and contagious; that it is accompanied in nearly all cases by a special type of constitution; and that its normal termination is a form of baldness beginning in the temporal and frontal regions, and quite distinct from the coronal baldness already alluded to, although occasionally associated with it.

Fifthly, that seborrhea favors the epiphytic development of certain affections, such as acne vulgaris, acne rosacea, and seborrheic dermatitis, and probably also of lupus erythematosus and pityriasis rubra; and that it may, in certain cases, modify the clinical features of some other skin diseases, such as eczema, lupus vulgaris, syphilides, and psoriasis, which in their origin are unconnected with the seborrheic state.

He further states in part that it is doubtful how far seborrhœa oleosa can be pronounced morbid, since an oily flux sufficient to lubricate the skin and hair without becoming obtrusively evident is a normal and necessary condition, and slight variations from this in either direction are compatible with perfect health, cutaneous and general. It is only when the accumulation upon the surface is so excessive as to be unpleasant to sight and touch, or when it obviously favors skin infections, that we regard it from the standpoint of the pathologist; even then it is to be accepted rather as an altered condition of soil affording a cultivating medium for pathogenic organisms than as a disease *per se*.

It is a matter of common knowledge, too, that coronal baldness is almost confined to men, while women, who are almost equally subject to the undoubtedly parasitic forms of alopecia, are spared—thanks, perhaps, to the concentration of hair-producing power in the scalp in their sex—and it appears to be manifested earlier and more constantly in men of the educated classes than in those of the grades below, who wear less constricting though more infecting headgear than their more favored fellows. It attacks persons of good physique, often the very pick of humanity, enjoying perfect health, rejoicing in good digestions, clear complexions, and highly efficient nerve centers, and usually free from seborrhœa sicca, acne, and even the more visible manifestations of seborrhœa oleosa. Locally, the main area of denudation is central and symmetrical, and merges gradually into the region of healthy hair, not spreading by the fusion of isolated centers. The skin in and around the patch is smooth, and, although somewhat overpolished, is usually free from spot and blemish, and it is only in a small proportion of cases that the oily matter, if allowed to accumulate, may become conspicuous or may congeal into a wax-like deposit. The affection is non-contagious, apparently unpreventable, and has hitherto been found incurable, even with the most powerful parasiticides.

We do not know the exact nature of the alteration in the secretion in seborrhœa sicca that leads to its consolidation into scales, plates, or crusts, and it is even difficult to say how far there is an actual increase in the output of the glands.

Taking the male as our subject suffering from seborrhœa sicca, he

is found physically more often below the average than above it, his complexion is generally sallow and shining, tinged perhaps with a more decided yellow over the "rosacea area," where the oily exudation accumulates in largest quantities, and the sebaceous follicles, especially those over the nose and at the frontal hair line, may be dilated and plugged with secretion. His intellectual powers are up to the usual standard, although they may be handicapped by the effect of digestive troubles. Lastly, and especially, he is a potential or actual dyspeptic.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Our Present Knowledge of the Neuron.

At a recent meeting of the German Scientific and Medical Congress, Professor Verworn (*British Medical Journal*, Oct. 6, 1900) discussed the hypothesis that the nerve cells (ganglion cells) and nerve fibers (nerves) form one cellular entity, and that the nerve fibers, in the same way as the protoplasmic branches of the cell, are only terminals of the ganglion cell body. In this way the neuron is the cellular element of the whole nervous system. This doctrine the speaker referred to as having been founded on anatomical, embryological, and experimental investigations made about ten years ago. Since then many workers have been occupied with the finer structure and the connections between the various neurons. As regards the former point, fibrillæ had been shown to exist which might be the basis for the conduction of stimuli. Concerning the links, the researches of Held and others seem to have shown that in many cases there is a real continuity of neuron substance, and that the fibrillæ partially pass from one neuron to another. As to the function of the ganglion cells Professor Verworn described the theory of Mathias Duval, according to which the protoplasmic processes are contractile, fatigue during the course of the day leading to shortening, and producing the sensation of sleepiness, sleep being required to allow the processes to stretch again. This idea was described by Professor Verworn as mere hypothesis. Another point in dispute was whether in every case nerve stimulation must pass through the ganglion cell; whereas there were some arguments against this, there appeared to be no doubt that these bodies are the real seats of specific nervous processes. Impulses have their origin in them, and in them is regulated the intensity and duration of these processes, the fibers having only the capacity to conduct, not modify.

THE MEDICAL AGE

VOL. XVIII. DETROIT, NOVEMBER 10, 1900. No. 21.

ORIGINAL CONTRIBUTIONS.

ANALGESIA OF ALL THE TISSUES BELOW THE DIAPHRAGM BY THE INJECTION OF COCAINE HYDROCHLORATE INTO THE SPINAL CANAL; WITH A REPORT OF CASES.

BY ANGUS MC LEAN, M.D.,

Surgeon to Harper Hospital; Clinical Professor of Surgery in the Detroit College of Medicine, etc.

This method of anesthesia has been known to the profession since 1885, in which year it was described by J. Leonard Corning, M.D., of New York (*New York Medical Journal*, Oct. 31, 1885). It did not become popular at that time, and was not generally resorted to. It remained for Professor Tuffier, of Paris, to demonstrate its application and efficiency in operations below the diaphragm. Professor Tuffier did some of these operations before the members of the International Medical Congress in Paris, in August of this year. Its application consists in the injection of a cocaine solution into the lumbar subarachnoid space. The points needing attention in subarchnoidean cocainization are: (1) The perfect sterilization of the needle, syringe, and cocaine solution; (2) the proper introduction of the needle or cannula; (3) the amount of the cocaine solution necessary.

The needle and syringe are thoroughly sterilized by boiling in the usual manner. I have used the all-glass syringe, with removable rubber piston. It admits of any sterilization that may be desired.

Professor Tuffier prepares his solution as follows: The solution is subjected to a temperature of 80° C. in a water-bath for fifteen minutes, and then kept at a temperature of 38° C. for three hours. It is now for a second time brought to a temperature of 80° C.; then allowed to cool to 38° C. This sterilizing process is repeated five or six times. The anesthetic properties of the cocaine are not altered by the sterilization.

The needle must be long enough—about three and one-half inches

—to pass through all the tissues of the lumbar region and to extend into the spinal canal. Tuffier uses a platinum needle of the following dimensions: length, 9 centimeters; external diameter, 1.1 millimeters; internal diameter, .8 millimeter. I have used a needle made of finely drawn crucible steel and of less diameter than that of Tuffier, with a trocar inserted into a cannula. The advantages of this modification are: a stronger and smaller needle; the prevention of blood entering the canal, which is almost certain to happen if much manipulation is used in introducing it; a closely fitting trocar will, as it is withdrawn, leave a vacuum in the cannula, and the spinal fluid will find free exit, provided the tip of the cannula is in the subarachnoid space.

FIG. 1.—Needle and trocar. (This needle is manufactured by the J. F. Hartz Co., Detroit, Mich.)

The point of the trocar has the same bevel as the cannula, and, when it is inserted, the point of the instrument presents a solid beveled surface. The trocar is held in position by a threaded shoulder that fits into the barrel of the cannula.

The spinal canal is entered through the lamellar space of the fourth and fifth lumbar vertebræ. This space is crescent-shaped, with the arch above; its widest transverse diameter is about three-fourths of an inch, and its superior inferior diameter about three-eighths of an inch at its widest point. This point is just at the lateral margin of the base of the spinous process.

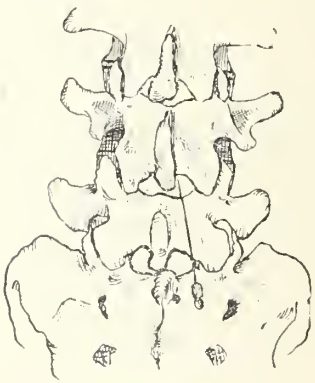


FIG. 2.—Posterior view of spinal column showing needle in lamellar space, between fourth and fifth lumbar vertebræ.

For introducing the needle, the patient is placed in the sitting posture. The lumbosacral surface is carefully asepticized. The tip of the spinous process of the fourth lumbar vertebra is located; this is on a level with the crests of the ilia. The index-finger of the left hand is kept on this process and the patient made to bend well forward so as to flex the spinal column as much as possible and thus increase the space between the lamellar borders. The needle is now inserted about one-fourth inch to the

right of this spinous process, near its lower margin, and carried inward, with a slight inclination toward the median line. It passes through the skin, subcutaneous tissue, lumbar aponeurosis, erector spinæ, multifidus spinæ, ligamentum subflavum (lamellar space), dural and arachnoid membranes (spinal canal), and enters the subarachnoid space. The point is now free in the spinal fluid.

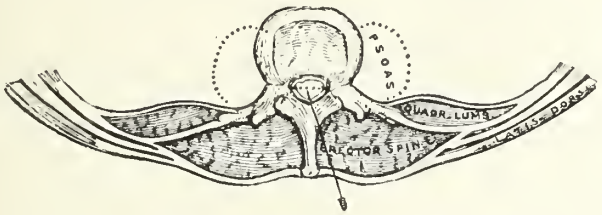


FIG. 3.—Transverse section of lumbar region (Gray), with needle passed into the subarachnoid space, the point near the cauda equina.

If the point of the instrument strikes the lamella it should be withdrawn a short distance, tilted either upward or downward, and again passed inward to see if it will clear the bony margins and enter the space. If two such trials, one with the needle tilted upward, the other with the needle tilted downward, are not successful, I think the instrument should be withdrawn and entered anew. There is no resistance to the needle, once it enters the canal.

I would recommend to all who are about to undertake this operation that they first perform it a few times upon the cadaver in order to familiarize themselves with the direction of the bony opening, with the distance the needle must travel, and with the loss of resistance when the point of the needle enters the spinal cavity. The fasciculi of the muscles of this region run parallel to the spine, and, if the needle is held with its flattened surface toward the spine, it will tend to force the fibers apart and not to cut them, as it does when its wedge-shaped point is inserted transversely.

When the needle is in the spinal canal and the trocar is withdrawn, the cerebrospinal fluid will immediately escape. If the fluid does not escape, the needle is improperly placed and must be adjusted. The escape of the fluid is evidence that the needle is in the proper position, and not until this is assured should the cocaine solution be injected.

The syringe containing the solution (fifteen minims of a two-per-cent solution) is attached to the needle and the injection made. This should be done slowly, by injecting one or two minims and waiting a few seconds; injecting one or two minims more and waiting a few seconds; and so on until the whole is injected. The needle is then withdrawn and the external puncture aseptically sealed over.

The patient in the course of three or four minutes will state that his lower extremities are "feeling queer," becoming numb, going to sleep, etc. Complete anesthesia of the abdomen and lower extremities takes place in from eight to fifteen minutes.

REPORT OF CASES.

Case 1.—Mr. B——, aged twenty-one years. Necrosis of right tibia. The patient had taken chloroform twice before for operations upon the leg, and was greatly opposed to taking it a third time. After asepticizing the area, the needle was inserted into the subarachnoid space. Upon the withdrawal of the trocar, the cerebrospinal fluid ran out, forming a small stream, and continued to flow until stopped by holding the finger over the end of the needle. The syringe, containing fifteen minims of a two-per-cent cocaine solution, was now attached to the needle and its contents slowly injected. When the injection was complete, the needle was withdrawn and the skin puncture sealed with collodion. Five minutes later the patient remarked that his limbs were becoming numb, that they felt queer, etc. At the end of fourteen minutes the anesthesia was complete, and after this time he had no feeling of pain.

A circular amputation of the leg was made at the junction of the upper and middle thirds. When the bone was being sawed, the patient inquired, "What are you sawing?"

The operation was finished in about twenty minutes. He had no unpleasant feeling during the operation. His pulse rose to 120, and he became flushed within ten minutes after the injection.

Six hours after the operation the patient became slightly nauseated, and his temperature went up to 102.5°. There was a marked headache and a feeling of soreness in the muscles. Within the course of twelve hours these disturbances all subsided, and the patient made a good recovery.

Case 2.—Mr. J——, aged forty-four years. Tubercular testicle with sinus. Injected fifteen minims of a 2½-per-cent solution of cocaine hydrochlorate into the subarachnoid space. Sufficient analgesia to begin operation in ten minutes. No pain was experienced, except a trifling amount when the cord was cut. Six hours after the operation the patient vomited twice. There was a slight fever and some headache, which continued for eighteen hours.

Case 3.—Mr. H——, aged twenty-four years. Inguinal hernia. Ten minims of a 1½-per-cent cocaine solution was injected into the subarachnoid space. In eight minutes analgesia was sufficient for commencing the operation. No pain was complained of at any time during the operation. Six hours later he had quite a severe headache, which lasted four hours. Six hours after operation the pulse

was 110, temperature 100°, and in twenty-four hours the patient's condition was perfectly normal.

When the amount of cocaine necessary to secure complete anesthesia of the abdominal organs and lower extremities has been injected into the subarachnoid space, one is convinced that a powerful drug has been placed in a delicate cavity and is apprehensive lest unfavorable symptoms result. The patients upon whom I have operated by this method have all been strong, robust men, and free from any organic trouble. None of them presented any alarming symptoms whatever following the use of the cocaine. Yet I would not recommend its use without caution and close observance afterwards. Subarachnoidean cocainization produces a profound effect in a short time, and whether this may be followed by any detrimental sequelæ or not further reports will tell. Patients will consent to its use more readily than they will to the administration of chloroform.

The injecting apparatus should be as simple as possible, so as to minimize the danger of infection. The less the laceration of the meninges and adjacent tissue, the better, for less irritation will follow. The smaller the amount of cocaine used, the less will be the probability of unpleasant after-results.

REDUCTION OF COMPOUND FRACTURES BY EXTENSION AND EXTERNAL MANIPULATION WITH THE USE OF STERILIZED INSTRUMENTS ONLY IN THE WOUND.*

BY HAL C. WYMAN, M.S., M.D.,

Professor of Surgery in the Michigan College of Medicine and Surgery, Detroit.

The one distinctive feature of compound fractures is their openness—open to the air, open to foreign bodies, and open to the surgeon's fingers. This would not signify anything sufficient to deserve especial attention, were it not for the fact that openness means danger of infection, and infection means suppuration, fever, protracted illness, and sometimes death.

There are different degrees of infection, dependent upon the kind of microorganism that gets into a compound fracture, and the thoughtful, painstaking surgeon will sometimes try to determine by inoculation, culture, and microscopical examination, the species of infecting organism he has to deal with in a case that is going from bad to worse. But every surgeon should be prepared to treat a case of this injury so that it will be least likely to become infected and develop a course very much different from that of a simple fracture.

* Read before the Clinton County (Michigan) Medical Society at its annual meeting at St. Johns, Mich., October 4, 1900.

Every surgeon who has had many cases of open fracture to treat has seen some of them recover without fever, pus, or any untoward events. But such issue is rare, for the reason that the open fracture is usually infected before the doctor is called to see it.

Soiled clothing, soiled skin, dirt of the shop, field, and street, are quite apt to get into the wound along with the violence which causes it.

Sometimes the medical man who is called to the accident is more enterprising than thoughtful and careful. He thrusts his fingers into the wound, drags out clots and pieces of bone in a search for foreign matter and an endeavor to adjust the fracture, and thus infects the wound.

We all know that a wound is capable of taking care of a certain amount of infecting material, but just how much has not to my knowledge been determined.

We will say for this occasion that a compound fracture of the leg involving both bones in the lower third of the leg, the result of a runaway on a country road, will take care, without detriment, of all the germs that get into the wound during two hours that may elapse after the accident before the doctor gets there, unless it happens that the broken bones protruding from the wound have been ground into the dust and filth of the road.

And now, if the doctor will secure the approximation of the fragments by extension and manipulation of the foot and leg without putting his fingers into the wound, and will use sterilized forceps and gauze to remove foreign bodies, disturbing the clot as little as possible, and fix the knee and ankle in a position of physiological rest, making sure that soft parts as well as bones are nicely approximated so that there will be no dead spaces to gather and fix the fluids of the wound, and then seal all with an aseptic dressing of gauze and cotton, he will be quite sure to have his case heal with about the same results as a case of simple fracture. More time and more restraint will be needed, but there will be but little more pain and constitutional disturbance.

I am afraid that the doctor, in his zeal to secure an aseptic wound, sometimes fills the open fracture with dangerous filth in washing the leg. Great care should be taken to avoid rubbing or floating anything from the surface of the skin into the wound. Before any washing is done, it should be effectually plugged with aseptic material. Then, when the cleansing is finished and the fragments have been so far as possible adjusted by extension, the plug should be removed and the wound carefully cleansed of all accessible foreign matter. If there is visible dirt it may be floated out with 1:2000 sublimate solution.

If loose fragments are present and they are displaced and inclined to ride up into the wound, they should be carefully crowded into a

position where they will rest. The ordinary artery forceps, sterilized by boiling, is a good tool for this purpose. If the surgeon's fingers must go into the wound before he can feel safe about approximation of all fragments and periosteum, let him wrap them first with sterile gauze or use a sterile rubber glove.

It is doubtful whether the hands can by any system of washing and use of chemicals be made clean enough to make them always safe to use in contact with the fragments in a case of compound fracture.

It is cleaner, neater, better surgery, to reduce all open fractures by extension and external manipulation.

PHYSIOLOGY OF SEXUALISM.

BY N. E. ARONSTAM, M.D., PH.G.,

Assistant in Chemistry and Clinical Dermatology in the Michigan College of Medicine and Surgery, Detroit, Mich.

The desire of an individual to propagate his species is manifested in the sexual instinct, which is a *physiological process*. When this instinct reaches the epoch of sexual maturity, it becomes a *physiological law*. This, as well as the prestige of sexual desire manifested, varies in different individuals and races. Climate, heredity, and social conditions also play an important rôle in determining the force of the sexual instinct; thus, the difference in sensuality between the southern and northern is quite apparent. Development of the procreative function takes place earlier in the inhabitants of the tropical than in those of the temperate climes. Puberty in man makes its appearance about the fifteenth year, and is recognizable by a change in the voice, the growth of hair in the axilla, on the mons veneris, and on the face, and by the occasional occurrence of nocturnal pollutions. As a general rule, virility reaches its acme at the age of forty-five, after which a gradual decline takes place; the generative potency, however, outlasts that of virility, and may continue until the age of sixty five.

The sexual instinct in man is not intermittent as in animals, but is rather dependent upon the collection and expenditure of semen; it is a function of the cerebral cortex, and has a special center, which according to Ferrier is situated in the gyrus uncinatus, in common with the olfactory center. Three factors are necessary in order to create a sexual desire, viz.: (1) an emotion; (2) an idea; and (3) an impulse. The development of the sexual instinct is to be ascribed to sensations arising from the continually progressing reproductive organs. These attract the attention of the individual. Experience and reading intensify these emotional sensations and convert them into ideas. The latter, aided by the former, lead to the impulse to

fully experience them, to carry them out, and thus sexual desire is originated. A mutual dependence exists between the cerebral cortex—the seat of the origin of sensations and ideas—and the reproductive apparatus; the former conveying impulses to the latter, which is followed by hyperemia of the sexualia, resulting in seminal secretion, erection, and ultimate ejaculation. The latter phenomena are brought about by the aid of a second center, situated in the lumbar portion of the cord; it is a reflex center and is termed the "erection center," an intermediate station between the cerebrum and reproductive organs. Emerging from this center, we encounter nerve fibers, which descend to the sexual apparatus; another set of fibers ascend, pass through the pedunculi cerebri and the pons, to be ultimately lost in the cerebral cortex and sexual center. The latter is either excited by psychic or organic stimuli; by irritation set up in the peduncular tracts and the pons Varolii, the cervical portion of the cord, as well as by peripheral stimuli of the nerves supplying the penis, its adnexa, and the integument in their vicinity. The excitation produced either centrally or peripherally is finally conveyed to the nervi erigentes supplying the corpora cavernosa, the vessels of which dilate and become charged with blood. The return of the blood is impeded by the contraction of the bulbocavernosus muscle.

Reflex excitation of the center is possible under the following conditions: (1) Irritation of the peripheral nerves of the genitalia and their adnexa by friction. (2) Irritation of the urethra, as in urethritis; the rectum in hemorrhoids; the bladder in distention and calculi; overdistention of the vesiculæ seminales with spermatic fluid; hyperemia of the sexualia produced by lying on the back, which maintains intestinal pressure upon the pelvic circulation. It also may be induced by the irritability of the prostate in prostatism, and the excitation caused by catheterization. On the other hand, certain emotions and ideas may inhibit erection, or cause it to disappear when present; for instance, fear, joy, anxiety, surprise during the act of cohabitation, etc. The duration of erection depends upon the exciting stimulus, the presence or absence of inhibitory influences, the energy of the center *per se*, and the time of ejaculation.

All stimuli are either visual perceptions and memory pictures, or tactile impressions. Olfactory perceptions possess a decided influence in creating sexual excitement; we observe this mostly in animals at their rutting period, during which the female emanates a characteristic odor, the male being attracted by it. This odor is due to the volatile secretion of specific glands situated in the genitalia; especially is this the case in certain members of the moschus family, also in the beaver, the civet-cat, etc. In man olfaction plays a similar rôle in creating sexual desire. Flowers may thus be conducive to it. Riche-

lieu lived in an atmosphere of fragrance and perfume, in order to excite his dormant sexual functions. In the Orient pleasant odors are esteemed for their relation to the sexual system; the harem of the sultan is constantly filled with the scent of roses. The perspiration of females may frequently excite eroticism in the male. The odor of musk is said to be conducive to sexual excitement, as certain libertines are in the habit of using this perfume quite freely. An exclusive sedentary and luxurious life, tropical regions, warm beds and apparel, highly seasoned dishes, etc., are apt to cause sexual excitement. Gluteal stimulation does the same: thus we observe in boys who have been subjected to spanking the occurrence of erections and even ejaculation, which, when repeated, may lead to the vicious habit of onanism. Erection, ejaculation, and orgasm may also be the result of flagellation in general. There are regions on the cutaneous surface which are particularly prone to create eroticism, and are therefore termed "erogenous zones;" this is especially the case in women, in whom we find those zones more pronounced in the mammæ, the palm of the hand, and the integument of the cervical vertebræ. In the male the only erogenous zone is the glans penis, its adnexa, and the adjacent integument. Pathologically, however, the anus may assume eroticism and become an "erogenous area."

To recapitulate: The psychic-physiological process comprehended in the idea of sexual instinct comprises (1) conceptions originated centrally or peripherally, and (2) the pleasurable feelings coinciding with them. The latter establishes a longing for sexual satisfaction; this desire grows stronger according to the intensity of cerebral stimulation, induced by appropriate conceptions and the activity of the imagination. Reflex excitation of the center of erection intensifies the lustful sensations, which are accompanied by a turgescence of the corpora cavernosa and contraction of the bulbocavernosus muscle. The hyperemia becomes effaced only after successful coitus; on completion of the act orgasm and ejaculation of semen occurs, relaxation of the bulb ensues, and the circulation of the parts flows unobstructedly in its proper channels. If copulation cannot be accomplished, then inhibitory conceptions arise, overcome the sexual longing, and prevent the sexual act. Inhibitory ideas in the civilized man are necessary and distinctive. Moral freedom is given to individuals, and the decision, whether under certain circumstances excess or crime be committed or avoided, rests on the one hand upon the strength of the conceptions and the accompanying lustful sensations, and on the other hand upon the power of inhibitory influences. Exciting and inhibiting powers may be increased or weakened by various factors, three of which play an important part, viz., Vulcan, Bacchus, and Venus.

In connection with the foregoing, a few words about the physi-

ology of the act of cohabitation proper may enhance the lucidity of the subject more fully. A proper performance of this act demands sufficient erection, without which coitus is impossible. The phenomena accompanying the sexual act are as follows: turgescence of the genital apparatus, injection of the conjunctivæ, a temporary exophthalmia, dilatation of the pupil, and palpitation of the heart. All these manifestations are due to a stimulation of the vasomotor nervous system. The act is accompanied by lustful sensations, which, in their turn, coincide with the passage of spermatic fluid through the ejaculatory ducts into the prostatic urethra, brought about by sensory stimulation of the sexualia, which is transformed into a reflex motor impulse. The pleasurable feelings occur earlier in the male than in the female; they grow rapidly in intensity, until the moment of the entrance of ejaculation, reaching their acme in the instant of free emission, and vanish promptly after it.

The most significant event during coitus is ejaculation. This is regulated by a special center, situated at the site of the fourth lumbar vertebra. It is termed the "genitospinal center," and is a reflex center. Excitation of this is followed by seminal emission from the vesiculæ seminalis into the urethra. Stimulation of this center proceeds from the glans penis and the adjacent structures; when a sufficient quantity of seminal fluid is collected plus the ever-increasing lustful perceptions, then the center begins to functionate. The reflex motor tract of the "genitospinal center" resides in the fourth and fifth lumbar nerves. Ejaculation consists of a spasmodic contraction of the bulbocavernosus muscle, which forces out the spermatic fluid. Lack of ejaculatory activity is due to cortical influences, as emotions in general, volitionary intervention, want of desire during copulation, etc. After the completion of the actus sexualis desire and erection cease, and the psychic sexual excitement gives place to a comfortable feeling of lassitude and *bien être.*

OUR MILK SUPPLY: SOME OBSERVATIONS AT HOME AND ABROAD.

BY S. E. MUNSON, M.D., SPRINGFIELD, ILL.

There is not in the intelligent study of the prevention of disease a subject of greater importance than our milk supply. The accumulation of evidence that is being so rapidly added to our knowledge of impure milk, and its importance to the medical profession, requires no greater emphasis than has been given this subject recently by both the lay and medical press. That even the public are becoming edu-

cated in this matter is seen in their demands for a better product and a positive knowledge that the source of their milk supply is a sufficient guarantee of its quality. That this is true is evidenced by the fact that two and three times the usual price is paid in all our large cities where it is known the dairy or cow farm is conducted upon a sanitary and scientific plan. Already some of the dairymen are recognizing this, as is shown by the amount of money invested in many instances to produce a pure milk, free from contamination. There is need of the medical profession, who are the recognized leaders and teachers in matters pertaining to the public health, carefully studying this subject and intelligently directing the education of the people and securing needed legislation.

In treating this subject it is necessary to consider the milk from the time of its delivery to the conditions influencing its production. First, it is absolutely necessary to start with a healthy animal, that nature's milk laboratory will give us a supply of pure, wholesome milk. Such laws as we have already regulating disease in cattle should be rigidly enforced and additional laws enacted.

The crusade against tuberculosis in cattle has done more to awaken scientific interest and investigation in this matter than all the talk and resolutions that have previously been offered. When we have practically destroyed the sources of tuberculous milk, we will have also secured a healthy animal capable of producing a pure milk. I think these are conceded facts.

The following are resolutions adopted by the U. S. Veterinary Association:

1. That tuberculosis in cattle and man is identical.
2. Germs of tuberculosis appear in the milk of tubercular cows.
3. That in the tuberculin test we have a most positive means of recognizing tuberculosis in living animals, and when properly administered it is harmless to healthy animals.

As to the reliability of tuberculin as a diagnostic agent, I submit the following, taken from the forthcoming report of the Board of Live Stock Commissioners of Illinois:

"There were in all 3655 cattle tested last year. Of these 560 were condemned; three that did not react typically were condemned on physical evidence, and found upon post-mortem examination to be diseased. Assuming that failure to discover in the viscera or organs disclosed to view lesions of tuberculosis is evidence that tuberculosis does not exist, there were 1.6 per cent of the condemned animals not diseased. In all fairness, as stated by the board, the number of animals that did not disclose the disease upon post-mortem examination that had been reacted to the test should be reduced to five, or less

than one per cent of the total condemned, which is so small a number as to be scarcely worthy of mention.

"One of the best possible demonstrations that a failure to discover microscopically the presence of tuberculosis in the carcass is not evidence that the animal is free from disease, or that tuberculosis is not present in a given case, is found in the investigations with and upon milk from tuberculous cows by Professors Gehrmann and Evans of the Columbus Medical Laboratory, Chicago. In both the milk and the cream in one of the cows referred to, in which no disease was discoverable on post mortem examination, tubercle bacilli were found in abundance by the microscope. A guinea pig inoculated with the milk of this cow contracted tuberculosis, as evidenced by microscopical examination."

In the milk examined by these same gentlemen for the board, taken from forty-one cows that had reacted to the tuberculin test, tubercle bacilli were found with the microscope in that from fifteen cows, or 36.6 per cent. Guinea-pigs were successfully inoculated with the milk from ten of these fifteen cows, or 24 3 per cent. In the milk of one of the ten cows which was communicated to a guinea-pig, the microscope failed to disclose tubercle bacilli, so the total number in which tubercle bacilli were demonstrated to exist is sixteen, which is 39.02 per cent of forty-one, the number of milks under investigation.

Contagion Demonstrated Through Milk. — Mr. Gurler, of DeKalb, was the first dairyman in the State of Illinois to have his own cows tested with tuberculin in 1895. All of the animals reacting to the test were destroyed. His premises were thoroughly disinfected, and since that date his dairy has been conducted under strict sanitary regulations, and all animals purchased for the dairy were tested in 1896, in 1897, in 1898, and in January, 1899. After the diseased animals were all eliminated from the herd as the result of the first test, no other diseased animal was discovered upon any subsequent test, until the test of 1899, when three calves were condemned, and upon post-mortem examination were found to be affected with tuberculosis. It was for some time a serious problem to account for the source of infection. During the past five years there had been no sickness in the dairy, no symptoms whatever of tuberculosis had been discovered, and there was no possible opportunity for the calves to contract the disease; no employee in whom there was any reason to suspect the existence of tuberculosis was permitted among the cattle, or upon the premises. A search for the cause of the disease discovered that a foreman had on several occasions fed these calves on milk procured from a near-by creamery, and it being the only conceivable source

from which the disease could be contracted, there being no exposure through association, it is reasonable and fair to assume that the creamery was the cause of the infection. In another instance the daughter, mother, and grandmother were demonstrated to have the disease. These are only a few of the many examples that prove conclusively the contagiousness of tuberculosis.

"It has been shown by Ostertay that there is much tuberculosis even in swine, in certain parts of Germany where they are fed upon material from creameries. And in certain parts of this country the more enterprising breeders refuse to feed their cattle upon the skimmed milk of the creameries and the slime of the separators, unless it has been sterilized." As yet only those who so desire have their herds tested, as there is no law compelling owners to have their cattle tested, except where tuberculosis is known to exist.

It is recommended by the board, and should have the hearty support of every physician, that in every instance where milk or butter therefrom is offered for sale, the proper legal authorities shall have first passed upon the health of the herd. Dr. T. M. Legge, secretary of the Royal Commission on Tuberculosis, 1896–1898, England, says: "From a brief summary of the legislation that has been enacted by other countries, it is apparent that tuberculosis is considered a contagious disease, a dangerous disease, and a disease that can be eliminated or at least controlled. The means which farmers and dairymen can adopt under present conditions will go far to check and lessen the disease, and the means which the State can adopt will help still further to eliminate it. To attempt to get rid of tuberculosis without regulating the conditions under which cows are kept, where they are forced for milk production, will fail of its purpose. The way in which tuberculosis has been largely spread is through the sale and turning out to grass of cows which have been stall-fed for some years, and are badly affected with tuberculosis. After a time they improve again, and at their next calving are sold into another dairy herd, carrying the contagion with them. This can only be prevented by regulating the sale of such animals."

Now that we have a healthy animal from which to obtain our milk, the next thing absolutely necessary is the proper care, feeding, and stabling to produce a milk of good quality, and maintain the health of the animal. The method of milking and caring for the milk until it reaches the consumer is of no less importance than the health of the cow and her proper attention. That milk may be the means of carrying and spreading other diseases than tuberculosis is a well recognized fact—such as diphtheria, typhoid fever, scarlatina, cholera, anthrax, foot-and-mouth disease, and glanders. Outbreaks of these

diseases have been traced to milk supplies, and the very high diarrheal death-rate in children is largely due to the presence of putrefactive organisms in milk. Many recent investigators have shown that the same dangers attending the consumption of raw milk exist in butter and cheese. Already some of our dairymen, as stated before, are endeavoring to produce a milk under sanitary and scientific conditions. Such examples as the work of Dr. Russell, of the Wisconsin Experiment Station, in supplying milk to Madison and Milwaukee, and his development of Pasteurized milk for infants and invalids, and also the work of Mr. Gurler, of DeKalb, proprietor of the Clover Hill farm, are worthy of the highest commendation.

I believe some of our dairymen would improve their milk if they knew how to go about it, as it surely increases the demand and the value in proportion to cost of production. Some of the remedies that may be offered for these troubles, after securing a healthy animal by State law, are that municipal laws be enacted regulating the sanitary conditions of stables and yards, with proper drainage and good water-supply. It is not necessary to tell just how a barn should be built, the number of square feet of floor space for each cow, etc., but the city authorities should know how the dairy should be built and conducted according to the most approved and scientific plans, and this principle should apply the same to a herd of ten cows as a hundred.

I claim it is gross negligence on the part of city authorities to ask or expect dairymen to put into operation and maintain a dairy that will furnish pure milk without proper assistance from the city or State. We may call this assistance compulsory, but it should be given in the way of submitting approved plans for construction of barns and other buildings, so that what improvements are made by the dairymen shall not be incubators for bacteria, temporary in character, and a waste of time and money.

In some parts of Germany it is estimated that "33⅓ per cent of the cattle are infected with tuberculosis." One might attribute to this condition why so little milk is drunk in Germany, and none used for any purpose that is not first exposed to heat. Efforts are being made to stamp out this disease. Many of the large cities on the continent have already established large farms where cows are fed and cared for in the most scientific manner. Such a farm I found in Vienna, at Rome, at Milan, at Paris, and the Walker-Gordon Laboratory established at London.

This problem of modifying cow's milk suitable for infant feeding is as much a question for solution and difference of opinion abroad as in our own country. This is noticeable in Vienna, the home of Professor

Gartner, whose well known ideas of milk modification consist practically in a graded dilution of water according to a child's age. Beidert's modification is used more than any other, even in Vienna; he has done more than any other man in Europe to establish percentage feeding. I had the practical experience of using both of these modifications in a child of my own. The same objection applies to both; no attempt is made to adopt percentage feeding so that the product is made to meet the requirements of the individual case. The consequence was, in my experience, that constipation in the child was a constant factor; I also attributed this to the employment of heat. The milk keeps for an indefinite time without cold storage, and where it agrees with the child it is very convenient for travel.

Upon arrival in Paris, as in Italy, only Gartner's milk was recommended to me by the physicians. This was not obtained from the laboratory, but after being modified at the farm could be bought at various shops throughout the city.

At London we were introduced to the Walker-Gordon milk by a Boston physician. I was much surprised to find that staid old London had been invaded by an American idea that was working with perfect success. They have a fine cow farm near the city, which is conducted on the same scientific plan as in our own country. The reliability of this milk, being perfectly sanitary and modified at the laboratory for each individual case, can be appreciated only by those traveling with children and invalids. Milk is shipped to American families in various parts of Great Britain during the summer and furnished for ocean voyages, and money refunded for bottles upon landing, either in New York or London. The milk for two children during our seven days' voyage was only Pasteurized and kept in cold storage, and it remained in good condition. The tubes were closed with antiseptic cotton. The method of closing the bottles has since been changed for travel and ocean voyages. Paraffin-sealed jars are used instead. With this method it is not necessary to use heat or any preservatives. Extraordinarily cleanly methods and rigid aseptic precautions have resulted in the production of a milk that is not only free from dangerous bacteria, but that also keeps from two to three weeks in a sweet and palatable condition. This only illustrates what can be done with milk produced upon scientific and sanitary principles.

Upon our arrival in New York we found awaiting us at our hotel a supply of milk that had been delivered the same morning from the Walker-Gordon Laboratory, using the same formula which had been ordered by mail from London a week before. Where cows are fed upon the same material and the same modifications are used, one can readily appreciate such advantages, especially with a child in traveling.

The same great need for a milk of this kind is found in every physician's practice.

A few days since a country physician told me that he experienced much trouble during the dry season of the summer, when cows feed upon weeds, rendering the milk unfit for use, and causing him to resort to various products on the market for children as a temporary substitute. I believe it is only a question of time when every physician will be in reach of a place where milk can be prepared according to the written formula of the physician to suit each individual case, and that this milk supply will come from cows whose food is selected for them and fed to them with scientific care.

Dr. Rotch says: "I believe that the medical treatment of the various abnormal conditions arising in infants is in the future to be largely dietetic rather than by means of drugs."

When physicians have acquired a rational knowledge of the hygiene of the mother and artificial milk therapy, there will be less and less recourse to the field of therapeutics.

With reference to the antityphoid inoculations in India last year the *Indian Medical Gazette* publishes some important figures. There were 1312 cases of typhoid fever among the British troops with 348 deaths, a death-rate of over 25 per cent. The ratio of admissions to total strength was 20.6 per 1000. There were 4502 inoculations, and among these men there were only nine deaths from typhoid fever. This gives 0.2 per cent of strength. There were forty-four admissions, giving 0.98 per cent of strength. Among the uninoculated in the same corps and at the same stations, of 25,851 men there were 657 cases and 146 deaths, giving the relative percentages of admissions and deaths as 2.54 and 0.56. This is strongly in favor of inoculation.

The daily press reports the establishment in Chicago of a new association of oddities who believe that the eating of raw food is the secret of longevity, perfect health, amiability of disposition, superior mental vigor, and economical living. They contend that the cooking of food is in opposition to nature's law, and that it is only a fad which originated somewhere in the early ages of man, and that since then humanity, mentally, morally, and physically, has been steadily on the decline. All the adherents to the new belief have discarded from their tables every edible that has felt the influence of fire. They say fire destroys all that is life-giving and healthful in food. Their diet list includes such toothsome dainties as dried beef, raw carrots, raw oats, wheat, and rice flour.

CORRESPONDENCE.

DEADHEAD AND DEADBEAT.

To the Editor of THE MEDICAL AGE:

"Well, sir, what are you going to do about it?" Who said this? The deadhead and deadbeat. Whom did they say it to? The physician, the obstetrician, the specialist. Why did they say it? Because they are deadbeats. Every physician, every obstetrician, and every specialist in the State of Michigan — yes, and in all the States — is suffering from deadbeatism and deadheadism. The deadbeats will tell you if they cannot get one physician, they can get another. And they tell the truth in this, if nothing more. The laws of this State put a premium on just such characters. A married man can make twenty-five dollars a week, or in a day, and can put it into his pocket, and have the cheek to tell his creditor to go to a place hotter than this. The unmarried man can spend it as fast as he earns it. So when he gets sick, the physician can treat him for the love he has for the profession. There never was a time in all the history of this country when there was so much deadhead and deadbeat rascality going on as now. When a man has property subject to execution, that man can be made to pay. But a very large majority of men must be taken on their honor. And I am glad to say there are many poor men more honest than some of the more wealthy. There are some services, however, that come in the practice of physicians that the poorest have no excuse for not paying—I mean obstetric cases. There is generally nine months' time in which to lay aside the usual fee for the doctor when the lying-in is completed. Yet I venture to say that not one in fifty has made any provision to pay the bill. I can remember when the doctor had his money as soon as the infant made a squall. Now the infant can squall for months and years without ever being paid for. What the obstetrician should do in this country is to demand that the usual fee for such cases be paid on the spot; and all should combine to this end. I hold that if a man is able to marry and have babies, he should be able to pay for them as they come along. Other sickness may be different. People do not always make ready for sudden sickness; so this can be excused. But they should be compelled to pay just the same, providing their sickness does not destroy their health permanently. Then there are cases of charity. No one has more of this to do than the physician; and he does it cheerfully, not letting one hand know what the other does. The physician's charity is not spread broadcast to be seen of men.

Now, Mr. Editor, how is this thing going to be done—to head off the deadhead and deadbeat? I can see only one way — physicians must combine. They might have some law passed by the legislature that would help them; and this might be made to help other creditors as well as physicians.

If there ever was a class of creditors that ought to be preferred, it is the physician. His expenses are large. It takes a good farm to educate a doctor. It takes a mint of money to keep him as he should be in his profession—horses, carriages, books, instruments, rents, etc., too numerous to mention. It is a great mistake for the people to think a physician is getting rich when he has something to do. I venture to say that the average physician carries the smallest bank account of any of the professions. Hundreds carry none at all. And if it were not for the life insurance the wise physician carries, when he dies, as all men must, his family would want after his death. In this city, to my certain knowledge, two or three excellent physicians, having what the people said was a large practice, died in poverty, except for the insurance they carried on their lives. Hundreds and thousands of dollars on their books, but not ten cents on the dollar collectible.

The fact is that deadheads and deadbeats will not pay. They say they can get physicians who are only too glad to get their work. So they go from one to another, and never pay a cent for what the good physician has done for them.

The man who enters the profession of medicine at this time makes a grand mistake. There are other professions or occupations that pay a hundred cents on the dollar, while the profession of medicine pays about ten cents on the dollar. Look in your books, fellow physicians, and see if I do not tell the truth. Oh, I know you have looked them over day after day until your brain whirls, to find a dollar that you can put your hand on when you want to pay your grocer and your butcher. And your wife must fix over her dress every year rather than buy a new one, because your bank account is low.

I am not saying all this for myself alone. I know this touches a very large majority of the physicians in this State. The physicians have it in their power to make it better. Will they do it? Protective laws and combination will cure the evil.

I do not say protect the physician only, but all classes of dealers. Had Mr. Pingree approved the act of the legislature two years ago, somebody might have had something by this time, and not distressed a man or woman. A large number of men will not be honest unless the law compels them to be.

Now I have said what I believe every physician will approve. How to do it is the question. Yet it can and must be done if we poor mortals live very long on this mundane sphere. Let us agitate the matter thoroughly. Use the public press, use the medical journals, use our tongues, use everything that will conduce to this most desirable end.

Yours very truly,

L. L. Howell, M.D.

Flint, Michigan.

A despatch to the *New York Times* states that suicides are becoming a shocking frequency in the French army, and it is no secret that it is the result of the insupportable treatment which the soldiers are subjected to and the general brutalizing condition of life which they are compelled to lead during their three years of service.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

MEDULLARY NARCOSIS.

The increasing popularity of the method of inducing narcosis by medullary injections is attested by the report of cases so treated in another part of this journal. There seems to be no possible doubt as to the efficacy of this kind of anesthesia. The suspension of sensation is as complete as in other forms of anesthesia. While the lumbar cord has so far been selected as the site for this kind of anesthesia, the fact that dural infusion has been practiced with comparative immunity in the use of such substances as iodine gives rise to expectation that some bolder adventurer will some day seek to effect anesthesia at higher points. It will also be interesting to note the effects of other substances so administered, such as hyoscine, chloral, or chloretone.

The dangers of medullary narcosis must not, however, be minimized. Cocaine is ofttimes treacherous in its effects. Reliance cannot be placed on its uniformity of action in different individuals. The absolute sterility of the instrument inserted into the subarachnoid space, and of the fluid injected, is a matter of profound importance. The pathogenic microbes that enter the spinal canal must carry with them the curse of the infernal gate, and all hope must be abandoned in those in whom they enter.

Then also the preservation of consciousness is not a very desirable condition for either patient or operator. It brings back one of the bugbears of the old surgeons. The psychological effects of witnessing mutilation of one's own person might in many cases have a profound import.

All things considered, it is doubtful whether this new method of narcosis will in any sense supplant the older one. It is difficult to think that it can be safer, and in the fact that it does not dethrone consciousness is an obvious disadvantage. In those cases in which chloroform cannot be safely administered it will, however, doubtless prove an additional resource to the expedients of surgery.

EDITORIAL NOTES.

A Cure for Malaria.

Many years ago the great bacteriologist Koch, whose claims to the gratitude of humanity had been beyond dispute, announced somewhat prematurely that he had followed his discovery of the tubercle bacillus by the discovery of a cure for the dread disease of which it was the inherent pathogenic cause. The same distinguished man now announces as a result of his recent investigations in Africa that he has a cure for malaria and also a means of ridding us of the pesky mosquito, in whose body the plasmodium malariæ undergoes certain of its metamorphoses. Let us hope that his predictions may be true.

Suprarenal Gland in Heart Disease.

A preponderance of evidence bears testimony to the extreme value of suprarenal gland in heart disease. It is in all probability the most powerful heart tonic known. Dr. S. Floersheim, in a recent number of the *New York Medical Journal*, describes several cases in which this substance was administered. The physiological effect was noticed sometimes half a minute after ingestion. In a case of mitral regurgitation the murmur was noticed to disappear for a considerable time under the use of the remedy.

Typhoid Serum.

The African war has given opportunity for testing on extensive scale the value of protective inoculations against typhoid fever. While the case mortality does not seem to have been much arrested, there seems to have been a sevenfold reduction in the morbidity among the inoculated. Taken altogether, the evidence, while in no sense complete, is preeminently in favor of the value of the serum for protective purposes.

Great Brains.

The possession of great brains does not necessarily imply great intellect. The heaviest brain yet on record is that of an epileptic idiot of twenty-one years of age. It weighed 2850 grammes. The wearers of small hats may take comfort in the belief that their brains may have structural perfections which offset their size.

ITEMS AND NOTES.

SMALLPOX is rampant in Butte, Montana.

THE library of the great chemist, Bunsen, is now being sold at Leipsic.

LANNELONGUE, of Paris, has been made a commander of the French Legion of Honor.

AT the Philadelphia Almshouse four graduates in dentistry will be added to the staff of residents.

A HOSPITAL for contagious diseases at Westmount, Montreal, to cost $75,000, is under contemplation.

THE Chicago Eye, Ear, Nose, and Throat College has increased its capital stock from $10,000 to $25,000.

GALVESTON has at present a New York sanitary expert, Dr. Loper, putting the streets in a sanitary condition.

DR. G. FRANK LYDSTON's book, entitled "Panama and the Sierras: a Doctor's Wander Days," will soon be issued.

THE Colorado Board of Health has raised the quarantine against Chinese and Japanese traveling from San Francisco.

THE Medical Association of Colored Physicians held its annual convention in St. Louis, Mo., the first week in October.

THE government has appropriated $45,000 for the improvement of the United States Naval Hospital at Chelsea, Massachusetts.

A MOVEMENT is on foot among the women of Brooklyn to establish a memorial to the memory of the late Dr. Alexander J. C. Skene.

IT is stated by an exchange that in Hungary there are thousands of villages and hundreds of towns without a doctor within ten miles.

MANY cattle near Crow's Landing, California, are being killed by anthrax. The germ is found in the water of a canal where the cattle drink.

THE State Board of Health of Indiana reports a great increase in typhoid fever, and diphtheria and smallpox have been reported in nine counties.

THE Alvarenga prize for 1900 has been awarded to Dr. David De Beck, of Cincinnati, Ohio, for his essay entitled Malarial Diseases of the Eye.

DR. MAX SCHAEFFER, a promising young rhinologist of Bremen, and one of the latest victims to the Swiss glaciers, was found dead in a crevasse.

THE Hebrew Home for Consumptives, Denver, is to have a new wing, to cost about $30,000. The money was raised by voluntary contribution.

NEW YORK CITY has already expended $60,000 upon the Homeopathic Hospital, and is now asked for an endowment of $149,000 for maintenance.

AT a recent meeting of the New York Board of Health it was stated that there were about 40,000 cases of tuberculosis in that city during the past year.

THE 15,000 francs which Yersin received last spring as the Audiffred prize, has been applied by him to the extension of his plague-serum laboratory at Nha-Trang.

RECENT experiments conducted by German physicians have shown that about twenty-five per cent of all schoolchildren in that kingdom have some defect in their hearing.

THE Sealy Hospital of Galveston, which was reported to have been destroyed by the storm, suffered no harm aside from broken windows and drenching of certain rooms.

A SHORT time ago an epileptic in Jersey City was seized with a convulsion and fell face downward in a puddle of water only two inches deep, and when found was dead from suffocation.

DR. FREDERICK A. COOK, of Brooklyn, who accompanied the Belgian antarctic expedition in 1897 as surgeon, has written his experiences in a volume entitled "Through the First Antarctic Night."

THE French Society against the abuse of tobacco has awarded the first prize to Menelik, Emperor of Ethiopia, as he prohibited the use of tobacco throughout his dominions under severe penalties.

DR. FIFE FOWLER, for fifty years connected with the Queen's Medical College, Kingston, Ont., has recently resigned the professorship of the practice of medicine. Dr. James Third has been appointed to fill the vacancy.

THE chief surgeon of the Southern Pacific's hospital department, in order to advance its efficiency, will send one of his assistants East annually to visit the leading medical institutions and study the latest methods in surgery.

GEORGE F. BARKER, M.D., Ph.D., for twenty-eight years professor of physics at the University of Pennsylvania, has resigned on account of ill health. He has had conferred upon him the title of "Professor Emeritus in Physics."

THE Pullman Company threatens not to build the contemplated shops at Denver if the city council persists in passing an ordinance requiring the fumigation of all sleeping-cars upon their arrival at and departure from Denver.

OSTEOPATHS in Milwaukee have been arrested on warrants sworn out by the assistant district attorney. They are charged with unlawful use of the title of "Doctor" and of practicing medicine without a license from the State board.

AT the annual convention of the Connecticut Catholic Total Abstinence Union which was held recently, the president stated in his address that while habitual intemperance among men was decreasing, alcohol among women was becoming more common.

IN the University of Bordeaux, Dr. M. Le Dantec has just been appointed to give a course of instruction on tropical diseases. In Holland the teaching of tropical medicine has recently been inaugurated by Dr. J. H. Kohlbrugge, privat-docent in the University of Utrecht.

HARVARD MEDICAL SCHOOL is to have a new home in Brookline, a syndicate having purchased a large strip of land which they intend to hold in trust for the school. Early next year work will be begun on the physiological laboratory, for which $50,000 has been voted from a bequest.

THE board of trustees of the Jefferson Medical College, Philadelphia, have decided to establish a laboratory to be known as the J. M. Da Costa Memorial Laboratory of Clinical Medicine, in honor of the memory of the late Professor Da Costa. Donations toward the building fund are invited.

El Siglo Medico announces that the Spanish government has appropriated $8000 to enlarge Dr. Cajal's laboratory at Madrid, with $4800 annually for its maintenance and a pension of $1600 for the distinguished scientist, on whom the Moscow prize was bestowed by the International Medical Congress.

NEW PUBLICATIONS.

STUDIES IN THE PSYCHOLOGY OF SEX.

The author of this work is well known as one who has devoted time and thought to the consideration of sex problems. His works have always been of a scientific character, and that he should have preferred to publish the present book in America, rather than meet with the misconception of his intentions he has suffered from in England, can only be interpreted as a tribute to the true liberty of the press as it exists here. Nevertheless, it must be said that Mr. Ellis's book is entirely unsuitable for the general reader. It is an attempt to explain the evolution of the sense of modesty from a consideration of the sexual instinct in its protean forms. It naturally contains much information concerning sexual habits which can only be classified as esoteric in character. To the medical reader and to the psychologist the work will possess lasting interest. The three sections deal with the evolution of modesty, the phenomena of sexual periodicity, and auto-eroticism, or the spontaneous manifestations of the sexual impulse. Exceedingly interesting will be found the attempt to substantiate the fact of periodicity in the sexual manifestations of sleep.

The book undoubtedly will be widely read, and if confined within an understanding circle cannot fail to instruct and edify. That it should stimulate a sense of lubricity in the general reader certainly cannot be imputed as a motive for its production.

Studies in the Psychology of Sex. The Evolution of Modesty, the Phenomena of Sexual Periodicity, and Auto-eroticism. By Havelock Ellis. Philadelphia, New York, and Chicago: The F. A. Davis Co., 1900.

MENTAL DISEASES.

A worthy product of the scholarly atmosphere of the Johns Hopkins University is this latest volume in the field of psychiatry by Professor Berkley, dedicated to Prof. Henry M. Hurd, so well known in Michigan. It goes further and does more than any text book which we have to clearly set forth the pathological basis of the insanities and its immense importance. His opening sentence, "In mental affections we have invariably to deal with a pathological condition in the brain, or in the component tissues, or in both," clearly recognizes the now generally accepted view that functional as well as organic diseases rest upon pathological changes of structure, although modern means of research have not as yet clearly revealed the conditions underlying the former. The gradually lessening list, however, with advances in histological research, of those diseases of unknown pathology makes us hopeful that these will be eliminated in the near future.

The anatomy and histology of the central nervous system, the histology of the cortex, the finer structure of the nerve cell, the general and special pathology here involved, particularly with reference to vascular changes, are interestingly and ably discussed in the introductory portion of the book. The clinical section embraces a discussion of the special symptomatology, pathology, and therapy of the various forms of mental disease.

Admitting the impossibility of accurate classification, the author chooses to follow in the main that of Krafft-Ebing, discussing the various mental diseases under the following groups:

1. Mental diseases without ascertainable pathological alteration of the brain substance.
2. Mental diseases sequential to ascertainable alteration of the cerebral substance.
3. Insanities due to inherited or acquired mental instability.
4. States of complete or incomplete retardation of the psychical (and physical) development.

Perhaps the most marked departure from the usual is the devotion of no less than fifty pages to the discussion of neurasthenia and the neurasthenic psychoses and the psychoses accompanying hysteria, conditions which have hitherto received slight or no mention in our text-books on mental disease. A final chapter adds a fifth group, viz., the psychoses of childhood.

The literary style is excellent, and the book is thoroughly scientific from beginning to end. We cannot too strongly commend the clearer exposition of the pathology underlying the insanities. The extensive bibliography cited is an evidence that the author has widely drawn from the varied work of French, German, Italian, and English writers as well as those of other languages. The work therefore brings to its readers the sifting of the best modern research in psychiatry.

The work of the publishers is well done and the plates are excellent. To these, Michigan asylums have contributed some excellent illustrations of typical cases.

A Treatise on Mental Diseases. Based upon the Lecture Course at the Johns Hopkins University, 1899, and Designed for the Use of Practitioners and Students of Medicine. By Henry J. Berkley, M.D., Clinical Professor of Psychiatry, Johns Hopkins University, etc. Pp. 601. New York: D. Appleton & Co.

THE TWENTIETH CENTURY PRACTICE.

The concluding number of the Twentieth Century Practice forms a fitting climax to a series of volumes to which any medical editor or publisher may point with pride. The twentieth number contains some significant articles, among which must be mentioned the truly classical ones on tuberculosis. Lartigau discusses the bacteriology, pathology, and etiology. His article is a model compendium of recent knowledge upon the subjects with which he deals. Berg deals with symptomatology, and Knopf gives a masterly contribution on diagnosis and treatment, in which the reader will find special consideration given to the details of sanitarium treatment. Bowen discusses tuberculosis of the skin. An excellent article on yellow fever, and other articles on minor subjects, including a valuable one on mushroom poisoning, complete a volume which the practitioner will cherish for its substantial additions to his resources.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XX: Tuberculosis, Yellow Fever, and Miscellaneous. General Index. New York: William Wood & Co., 1900.

PHYSICAL DIAGNOSIS.

Physical diagnosis is manifestly a subject on which it is difficult to say much that is novel, and the author of this work modestly states that as far as he knows his book contains nothing original. He has, however, endeavored to avoid such errors as "that the aortic second sound is normally louder than the pulmonic second, that aortic regurgitation murmurs are usually best heard in the second right interspace, that a hypertrophied left auricle can produce dulness and pulsation near the left sternal border, that systolic retraction at the cardiac apex means adherent pericardium, that epigastric pulsation denotes hypertrophy of the right ventricle, etc."

The diagrams are in many cases different from those which custom has made stale. In fact, the character of the manual is decidedly modern in tone and will be found an admirable addition to the student's text-books.

Physical Diagnosis of Diseases of the Chest. By Richard C. Cabot, M.D., Physician to Out-patients, Massachusetts General Hospital; Assistant in Clinical Medicine, Harvard Medical School. With One Hundred and Forty-two Illustrations. New York: William Wood & Co., 1900.

PURDY'S URANALYSIS.

The fact that this is the fifth edition of Purdy's excellent manual is in itself sufficient testimony of the popular appreciation of its value. In the new edition certain new lines of research have been developed, and the reader will find the principles of centrifugalization carried higher than at any time before. The book leaves nothing to be desired as a text-book.

Practical Uranalysis and Urinary Diagnosis. A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, LL.D., M.D., Queen's University, Fellow of the Royal College of Physicians and Surgeons, Kingston, Canada; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes: I s Causes, Symptoms, and Treatment." Fifth Revised and Enlarged Edition. With Numerous Illustrations, Including Photoengravings, Colored Plates, and Tables for Estimating Total Solids from Specific Gravity, Chlorides, Phosphates, Sulphates, Albumin, Reaction of Proteids, Sugar, etc., etc., in Urine. 6 x 9 inches. Pages xvi-406. Extra Cloth, $3.00, net. Philadelphia: F. A. Davis Co.

DISEASES OF CHILDREN.

This is a well known English work upon pediatrics. It possesses merits that fully warrant an American edition. The author has endeavored to elucidate the causes of disease as it is incident to childhood. The work is conceived in a spirit which is purely practical and clinical. It is written in attractive style, and has distinct literary merits. The work should be borne in mind by the student seeking a suitable manual of instruction, as well as by the practitioner who may desire to keep in touch with recent advances in pediatric art.

Medical Diseases of Infancy and Childhood. By Dawson Williams, M.D., Physician to the East London Hospital for Children. New Second Edition. Specially Revised for America by F. S. Churchill, A.B., M.D., Instructor in Diseases of Children, Rush Medical College. In One 8vo Volume of 538 Pages, with 52 Illustrations and 2 Colored Plates. Cloth, $3.50, net. Philadelphia and New York: Lea Brothers & Co.

BACTERIOLOGY AND SURGICAL TECHNIQUE FOR NURSES.

The author of this work is already on record by reason of her excellent little manual of materia medica for nurses. The present work consists of a compendium of lectures on bacteriology and surgical technique. The subjects treated of are described in concise and simple terms, and the second portion will be found to contain an amount of practical information on surgical nursing procedures which will be of great value to the student-nurse.

Bacteriology and Surgical Technique for Nurses. By Emily M. A. Stoney, Superintendent of the Training School for Nurses, St. Anthony's Hospital, Rock Island, Ill.; Author of "Practical Points in Nursing," "Practical Materia Medica for Nurses," etc. Illustrated. Philadelphia: W. B. Saunders & Co., 1900.

PRACTICAL MEDICINE.

In this one volume and in very concise form the student will find the condensed facts of many specialties which he would usually have to seek for through numerous handbooks. The present handbook is primarily a compendium of essential facts and in no instance gives a discursive account of the matter with which it deals. For those striving to attain an understanding of the main facts of medical science it will be found a most satisfactory manual.

Modern Medicine. By Julius L. Salinger, M.D., and Frederick J. Kalteyer, M.D. Illustrated. Philadelphia and London: W. B. Saunders & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Notes on Mercurol: A New Remedy in Urethritis.

Ramon Guiteras, M.D., professor of genito-urinary surgery in the Post-Graduate Medical College of New York (*The Lancet*, Sept. 22, 1900), states that he has thoroughly tried mercurol in his clinic, and from his experience has drawn certain conclusions which he presents in this paper. After describing the chemical nature of mercurol, he states that he found the weaker solutions had little effect and the stronger solutions were at first irritating. He finally concluded that the average strength best borne by the patient is ten grains to the ounce, or approximately two-per-cent. After having reached this conclusion he had the histories of one hundred cases recorded, in thirty-three of which an examination for the gonococcus was made, revealing its presence in thirty cases. In the remaining sixty-seven cases a clinical diagnosis was depended upon, since the writer considers the experienced eye competent to recognize the disease. In one extremely interesting case no gonococcus could be found in the urethral discharge, although gonococci were present in that of some venereal ulcers on the glans.

In these cases a two-per-cent solution of mercurol was ordered, which the patients were directed to inject three times a day, after micturition; the injection to be held within the urethra for five minutes at each operation. The clinical reports of the cases show that frequently in two days after beginning the use of mercurol gonococci could no longer be found in the discharge.

The author discusses at some length the value of the term "practically cured," and sums up his argument by saying that to draw conclusions of value we should consider only cases that have been under treatment for three or more weeks, omitting those making but a few visits. On this basis he eliminates all but sixty-five cases from his report, and tabulates these as follows: Ten cases, or fifteen per cent, were cured in four weeks; fifteen cases, or twenty-three per cent, were cured in six weeks; twenty cases, or thirty per cent, were practically cured, as there was no discharge, though there were some shreds in the urine at the end of from four to eight weeks.

One of the most valuable observations that the writer has made is the fact that *only two cases suffered from complications*, one having developed gonorrheal rheumatism and the other epididymitis. He

states that this fact in itself would tend to argue much in favor of the use of mercurol, for where is there any other solution or mixture which does not show a greater percentage of complications? When we consider that many writers claim that epididymitis occurs in twenty per cent of all cases of urethritis, the rate of one per cent reported in this series of cases argues much in favor of mercurol as a harmless yet efficient injection.

Another interesting feature is that in only one of the one hundred cases was there any marked posterior urethritis. Therefore it would seem that *mercurol quickly destroys the gonococcus, lessens the severity of the inflammation, and tends to prevent the development of complications.* From a comparative study of the different methods of treating gonorrhea the author concludes that treatment with mercurol is an advance beyond the older methods with balsamics and astringent injections.

Subarachnoidean Injections of Cocaine as a Substitute for General Anesthesia in all Operations Below the Diaphragm.

John B. Murphy (*Chicago Clinic*, September, 1900) says that an American, Dr. Leonard Corning, demonstrated in 1884–85 that anesthesia could be produced in this way. Oberst, Bier, and others later took up the matter, but the man who really advanced it as a practical anesthetic is Tuffier. The advantages of the procedure are: ease of application; thorough analgesia of all the tissues below the diaphragm; the retention of the sense of touch; absence of the reflexes; consciousness of the patient; avoidance of the primary, intermediate, and secondary sequences of the anesthetic, as cardiac phenomena, pulmonary lesions, and renal disturbance. Whether the cocaine will be found to interfere with the function of other organs time alone must determine. Tuffier, in his extensive experience from last November to the 10th of August, has had no untoward results of any kind, and has secured complete analgesia in every case. Hysterectomies, salpingectomies, nephrectomies, pylorectomies, cholecystostomies, and operations of that class are performed by him regularly in accordance with this method. The author gives the technique of the method, and reports nine cases of his own.

The Medical and Surgical Treatment of Acute and Chronic Lymph Nodes of the Cervical Region.

The cause of tuberculous adenitis of the cervical region, says H. H. Grant (*New York Medical Journal*, Oct. 20, 1900), is almost always local, and takes place through the buccal cavity.

The glandular manifestation, when it progresses, and especially when it is followed by suppuration, indicates a damaged and usually useless, often dangerous, gland.

The removal of such a gland *in toto* and promptly is neither difficult nor dangerous, and is the treatment indicated.

Nature will probably provide a new and equally perfect protection in the stead of the one that is lost.

Multiple enlarged glands indicate a constitutional tendency which will not be benefited by removal, except when local discomforts and dangers indicate it.

Small groups or single slowly growing glands are subject to the same indication.

MEDICINE.

Cause, Nature, and Treatment of Asthma.

In a carefully prepared paper on the cause, nature, and treatment of asthma, W. A. Wells (*New York Medical Journal*, Oct. 20, 1900) makes the following conclusions:

1. Asthma has so many points of resemblance with migraine, angina pectoris, and epilepsy that the suspicion may reasonably be entertained that they all have a similar pathology.

2. Of the theories which have been advanced to explain the pathogenesis of the asthmatic paroxysm, no one of them so well harmonizes all the facts as the vasomotor theory; and this only when we admit that the disturbance is essentially that of arterial contraction rather than dilatation.

3. There is always present in asthma a morbid constitutional state, affecting especially the sympathetic nervous system and giving rise to a certain nutritional aberration, whose most salient feature is the increase of uric acid and the urates.

4. Asthma occurs as a reflex neurosis from diseases of different organs, but especially often from those directly supplied by branches of the vagus nerve. The nasal trouble, which is the most frequent reflex cause, is not necessarily an obstruction, and may be very inconspicuous and difficult to detect.

5. Nearly all cases of asthma show evidences of a pronounced psychic element, as in the curious variety of exciting causes of the attack, in the capriciousness of its course and behavior, and its dependence upon emotional states, suggestion, etc.

6. In the treatment of the paroxysm of asthma, a strict individualization needs to be observed. The best remedies are those which

overcome arterial spasm, such as morphine, nitroglycerin, atropine, and chloral hydrate.

7. Treatment in the intervals of the attacks must be directed, in the first place, to the removal of the cause, and secondly, to the institution of sound hygienic and prophylactic measures in relation to the mind, diet, air, exercise, etc.

8. Medicinal treatment is addressed to improving the constitutional state, for which the best remedies are piperazine, iodide of potassium and the other iodides, the alkalies, and general tonic treatment.

Influence of Food upon Milk Secretion.

Temesvary (Trans. Kgl. Ungar. Arztever. Budapest, in *Centralblatt f. Gynäk.*, 1900, No. 39) reports concerning the influence of food upon the secretion of milk. His experiments extended upon 216 wet-nurses, who within from one to two weeks after labor were fed—for periods of four days at a time—according to the following rotation of diet: (1) Ordinary (mixed) diet; (2) milk diet; (3) preponderance of vegetable diet; (4) preponderance of animal diet; (5) rich mixed diet; (6) ordinary diet, with addition of from one and a half to two pints of beer per diem. This led to the following general conclusions: The largest amount of milk secretion occurred under a rich mixed diet, which also insured the largest absolute amount of cream. The next largest amount of fat followed upon the administration of ordinary diet, while preponderating vegetable and essentially animal diet produced the smallest amount of fatty constituents. According to Temesvary a rich mixed diet insures the most compact and best milk, vegetable diet producing the most watery secretion. The addition of beer to ordinary diet diminishes the amount of milk secreted, but noticeably increases the proportion of fatty constituents.

As to the mediate influence of maternal diet upon infants, Temesvary has noticed with all methods an equal absence of gastrointestinal disturbance, except with the vegetarian diet, which increases the tendency to digestive complications.

Concerning the increase in weight, animal diet, beer diet, and rich mixed diet afforded most favorable results; next came the ordinary (milk) diet, and lastly vegetable diet.

Temesvary concludes that the composition of the mother's dietary has a considerable influence upon the secretion of milk, the most important factor, however, being of a quantitative nature. If the amount of food prove insufficient, the secretion will be scant both in quantity and fatty constituents; if abundant and highly nutritive, the milk is larger in amount and richer in fats, ordinary mixed diet occupying the middle ground.

The Etiology of Tropical Dysentery.

We may sum up, says Dr. Simon Flexner (*British Medical Journal*, Sept. 29, 1900), the present knowledge of the cause of dysentery in the following way:

1. No bacterial species yet described as the cause of dysentery has an especial claim to be regarded as the chief microorganism concerned with the disease.

2. It is improbable that any bacterial species that is constantly and normally present in the intestine or in the environs of man, except where the disease prevails in an endemic form, can be regarded as a probable cause of epidemic dysentery.

3. The relations of sporadic to epidemic dysentery are so remote that it is improbable that the two diseases are produced by the same organic cause.

4. The pathogenic action of the amœba coli in many cases of tropical and in certain examples of sporadic dysentery has not been disproved by the discovery of amebæ in the normal intestine and in diseases other than dysentery. While amebæ are commonly present and are concerned in the production of the lesions of subacute and chronic dysentery, they have not thus far been shown to be equally connected with the acute dysenteries even in the tropics. In the former varieties bacterial association probably has much influence upon the pathogenic powers of the amebæ.

Medicinal Treatment of Tuberculosis.

Hericourt and Richet (*Nouveaux Remèdes*, Sept. 24, 1900, p. 413) recently reported to the Société de Biologie, Paris, the following most interesting conclusion, which they base upon extensive experimental research: The ingestion of every medicinal substance has a retarding influence upon the process of experimental tuberculosis; in other words, the authors come to the somewhat paradoxical conclusion that no form of medication is entirely devoid of efficacy. They have experimented in turn with chloride of sodium, urate of sodium, lactate of ammonium, cacodylate of sodium, aristol, creosote, camphor, bichloride of mercury, iodine, turpentine, lead, thallium, etc., and with every form of treatment they have noted beneficial results, the duration of life in animals treated being exactly one-third greater than in parallel test cases left without medication. They conclude from these experiments that foreign substances penetrating into cell protoplasm, especially of the nervous elements, decrease the affinity of the cellular elements for tuberculin; hence the indication for continually changing the remedial agent in cases of tuberculosis, since every new form of

medication adds its own special, though limited, efficacy to the sum of results. Hence also the conclusion that bacterial toxins influence most readily those cells which are not already saturated with substances more or less homologous with these toxins.

Neuropathic Hemorrhages.

Lancereaux (Proc. Acad. de Méd., Paris, Aug. 28, 1900, in *Progrès Médical*, Sept. 1, 1900) notices the frequent occurrence of neuropathic epistaxis or hemoptysis alternating with megrim, piles, and menstrual disturbances. The prophylactic treatment purposes to avoid local congestions and to modify by the use of appropriate exercise and hydrotherapy the nervous irritability which underlies this condition. Therapeutic means should be calculated to remedy the vasomotor disturbance or nervous influence which causes the bleeding. The rest-cure, opiates, ergotin, and quinine are indicated. Powdered ipecac (exhibited in an emetic mixture) constitutes one of the best means for securing vasoconstriction along the respiratory tract, during such a neuropathic spell.

A New Reagent for Albumin.

Mankiewicz (*Nouveaux Remèdes*, Sept. 24, 1900) considers that sulpho-salicylic acid represents the most delicate reagent for albumin, which by its aid can still be detected if existing in the proportion of one part to one hundred thousand.

Phosphates and urates are dissolved by the reagent, while other salts afford no precipitate. Neither sugar nor bile influences the reaction. Mucin in solution will alone give rise to a haze, which, however, promptly disappears upon heating.

Sulpho-salicylic acid, being easy to handle and comparatively cheap, has withal proven itself a valuable and reliable reagent for albumin.

THERAPEUTICS.

Treatment of Aneurisms of the Aorta.

In the Section of Therapeutics at the recent Interntional Congress of Medicine, Dr. Golubinin, of Moscow, said he had employed in eight cases the method of treating aortic aneurisms by injection of gelatinized serum recommended by Lancereaux and Paulesco. The number of injections varied, according to the case, from two to fifteen. Of the eight patients, four died in a short time, and the other four were

lost sight of; in three of the cases belonging to the latter group the injections produced no effect. In the remaining one they were followed by slight improvement in the subjective symptoms without modification of the objective signs. Dr. Golubinin had come to the conclusion that the method did not fulfil the expectations that had been founded on it.

Dr. Huchard said that in the treatment of aortic aneurisms it is a mistake to allow oneself to be hypnotized by the changes to be brought about in the contents of the sac—that is to say, in the blood —and to take no account of the containing structure. The method of gelatinized injections, which is useful, although insufficient, is open to this criticism. To complete its action, especially in persons with large heart and increased arterial tension—they are almost always at the same time subjects of Bright's disease—medicaments should be chosen which diminish arterial tension, such as potassium iodide, trinitrin, nitrite of amyl, and especially tetranitrate of erythrol, or tetranitrol, which Dr. Huchard has now used for a considerable time, and which, as compared with trinitrin, has the advantage of a more durable action. Moreover, an essential point is to supervise the diet, not in regard to quantity, as in Valsalva's method, but in regard to quality. Meat, which holds too large a place in our food, contains toxins which have an excessively powerful vasoconstrictor action. The best treatment of aortic aneurism is still absolute milk diet regularly adhered to.

Cacodylate of Iron.

In the Section of Therapeutics at the recent International Congress of Medicine, Dr. P. Lereboullet, Paris (*British Medical Journal*, Oct. 13, 1900), said that cacodylic medication in the form of cacodylate of soda having proved useless as a remedy for chlorosis and chloroanemia, Dr. Gilbert and he had used cacodylate of iron in the treatment of these affections. They injected under the skin ferric cacodylate, a very soluble and only slightly toxic salt, in a solution dosed at three centigrammes per cubic centimeter; they also gave it by the mouth in the form of drops to be taken before meals. The daily doses varied from three to ten centigrammes hypodermically, and from five to thirty centigrammes by the mouth. Both methods of administration proved to be alike free from inconvenience. In no case have they observed local or general disturbances; in particular there have been none of the renal complications which are so frequent after injection of other iron salts. Cacodylate of iron is indicated in affections where one has at the same time to counteract the diminution in number of

the red corpuscles, and the fall in the amount of hemoglobin (chlorosis, chloroanemia, lymphadenia, leucemia). Tuberculous chloroanemia, provided the pulmonary lesions are not too far advanced, seems to be specially benefited by this treatment, which has never caused congestive phenomena or hemoptysis. Albuminuria, which is frequent in such patients, is not a contraindication, but rather the contrary. In five cases the kidney lesions underwent marked improvement after the injections.

Dermatol in Gonorrhea.

Dokoutschaieff (*Nouveaux Remèdes*, No. 18, 1900) reports upon the use of dermatol in gonorrhea. Ten of his cases were in the acute stage, the other eleven had become chronic. In the acute stage where the whole urethra is involved, he first cleanses the canal with a two-per cent (?) solution of boric acid or potassium permanganate, after which he injects the following emulsion:

℞ Dermatol..... 2 grammes.
Pulv. acaciæ..... 2 grammes.
Aq. destillat..... 25 grammes.
M.

These instillations are to be repeated every two hours. The patient is to retain the injection for five minutes and then allow it to escape one drop at a time.

If the anterior urethra is alone affected, Dokoutschaieff forthwith begins treatment by instillations.

In chronic cases, after previous careful lavage, the author introduces a bougie of the following composition:

℞ Dermatol..... 0.60 centigramme.
Lanolini..... 10 grammes.
Ceræ albæ..... 2 grammes.
M.

He also recommends massage of the urethra (with the bougie *in situ*) of not more than twenty minutes' duration, and claims to have secured excellent results from this method of treatment.

Sodium Sulphate in Small Doses as a Laxative.

Dr. Manquat (*British Medical Journal*, Sept. 29, 1900) says a small dose of sodium sulphate (4 to 8 grammes), dissolved in a large glass of water at 38° C., and taken in the morning fasting, is a laxative which can be recommended for ordinary constipation, and also in patients in whom it is important to prevent any effort in emptying the bowel (piles, apoplexy, persons on whom abdominal operations have

been performed, etc.). Moreover, by the regular use of the same solution it is possible to obtain a true mineral water "cure," which has given him the best results in a certain number of dyspeptics. In such cases the treatment should be suspended for ten days every month.

Ergotin in Pneumonia.

Dr. Kleczkowski (*British Medical Journal*, Sept. 29, 1900) says that ergotin employed in a daily dose of three to five grammes from the period of rigor, before the appearance of bronchial breathing, has the effect of making the disease go through its evolution in four or five days. Given later it does not appreciably shorten the duration of the febrile stage; but it moderates the fever, relieves the dyspnea, and calms the delirium, which never resists its action more than twenty-four hours. Dr. Kleczkowski has used this treatment for eighteen years, and in all that period has never seen a single fatal case of pneumonia except in diabetic subjects.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

On Singers' Nodes.

Prof. Herman Krause read before the Laryngological Section of the recent Paris Congress an article on the above subject, an abstract of which (*Journal of Laryngology*, vol. xv, No. 10) follows. He describes singers' nodes as small globular structures, varying in size from a pin-point to a millet seed, and situated in the border of the purely elastic part of the vocal cord. He states that they are generally due to misuse of the voice in singing, not in speaking. Anatomically they are fibrous structures, with cystic contents and pachydermatous covering.

The disturbances due to singers' nodes are the following: The production of the singing voice is difficult in certain parts of the scale, because the vocal cords cannot be brought evenly in contact with one another, and the loss of elastic tissue interferes with the singing of piano and medium notes. Further, all singing quickly causes exhaustion. Consequently the singer is compelled to find a substitute for his lost register; this he can accomplish in one way only, by increasing the tension of the vocal cords. The tone suffers in various respects; it becomes "throaty"—that is to say, it is produced too much in the larynx, without proper assistance from the resonance chambers, or else the voice is limited to the chest register. In the

latter case the voice loses some of its power of expression; in the former case it loses its purity and beauty, because these depend on the combined working of vocal cords and resonance chambers, the latter adding over-tones to the fundamental note given out by the former. Further, the increased tension of the cords gives rise to pachydermia. This attacks first the small nodes themselves, then the processus vocalis and the pars interarytenoidea.

In the treatment one must first attempt to cause atrophy of the nodes by complete rest of the voice. If this fails, and if the patient must have his voice restored, surgical removal of the nodes, carefully avoiding injury to the cords, may be tried.

Relative Frequency of Adenoid Vegetations Among School-children.

The table given below contains the statistics obtained by Struckmann in an examination of 650 children from the communal schools of Nestoed, in Denmark (*Internat. Centralblatt für Laryngol.*, etc., vol. xvi, No. 10). In this series each scholar was submitted to digital exploration of the nasopharynx:

	Age 6–8.	Age 9–11.	Age 12–14.	Total.
Number examined, boys	104	136	80	320
Mild cases	26	39	17	82 or 25 % } 30 %
Severe cases	5	9	2	16 or 5 % }
Number examined, girls	70	120	61	251
Mild cases	12	31	13	56 or 22 % } 30 %
Severe cases	7	8	5	20 or 8 % }

Epilepsy Probably Due to Ozena.

Desimoni (*Internat. Centralblatt für Laryngol.*, etc., vol. xvi, No. 10) reports two cases of ozena which were complicated with characteristic attacks of epilepsy. It appeared from the history in both of these cases that the first epileptic seizures were synchronous with decided exacerbations of chronic nasal catarrh. With commendable reserve the author speaks of a "probable" relationship between the ozena and the epileptic seizures. The result of the therapeutic measures instituted would strongly support this idea. Carefully cleansing the nose with permanganate of potassium solution, and applying locally with cotton a mixture of one part creosote with four parts of glycerin, he had as a result the satisfaction of noting an entire disappearance of the epileptic attacks. In both of these cases the author found in the nasal secretions, among other microorganisms, a Fränkel diplococ-

cus with decidedly pathogenic power. Guinea-pigs, notoriously refractory to diplococcic infection as a rule, were killed by this germ within from twenty to twenty-four hours. The author suggests the possibility that the increased amount of ptomaines produced by these diplococci may have been sufficient to produce epileptic attacks.

Epistaxis.

Dr. F. C. Cobb (*Boston Medical and Surgical Journal*, No. 1, 1900) emphasizes the fact that frequently nephritis is a cause of chronic epistaxis, and urges that in every such case the urine should be carefully examined. For the treatment of the nasal hemorrhage he recommends the use of adrenal (suprarenal) extract. This does no injury to the mucous membrane of the nose, though it should be kept in mind that a later hemorrhage may occur after its use, when the vasoconstricting effect of the drug has passed off. When it becomes necessary to tampon, strips of gauze should be introduced along the entire length of the floor of the nose. The author does not speak favorably of the use of peroxide of hydrogen, recently so generally recommended for its hemostatic effect in nasal hemorrhage, nor does he favor the use of gelatin solutions, either applied locally by means of cotton tampons or by means of intravenous injection.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Simulation of Insanity.

Such specious and inadequate pleas as to the impossibility of continuously simulating insanity for several weeks are so often heard (in spite of the fact that cases of undoubted simulation have extended over several years) that we publish the following extract from the *Medical Review of Reviews* of July 25, 1900:

"Dr. Stover, superintendent of the Bunzlau Insane Asylum, relates (*Aerztliche Monatsschrift*, March, 1900) a case of simulation of insanity by a patient received into his institution. Apparently the proper way to estimate simulation is to put a patient through the complete examination usually employed to determine the kind and degree of insanity. Thus in this case we note that the patient, a man aged thirty, who had been sentenced to prison for bigamy and other offenses, was apparently poorly nourished and anemic. His skull was symmetrical in form, and free from evidence of trauma. Pupils equal and normal

as to light-reflex. Tongue protruded normally. No disorder of speech. On the other hand, there was facial asymmetry, the innervation appearing to be stronger on the left side. Some fibrillary twitching of facial muscles. Patient claimed to be unable to pucker his lips for whistling.

"With regard to phenomena which readily lend themselves to simulation, the facial expression was dull, immobile, the glance staring, the eyes directed away from the interrogator, and into the distance. Certain attitudes and the gait were markedly artificial.

"In regard to his demeanor toward other patients, he avoided the latter for a good proportion of his time. He seldom spoke first to any one, and appeared indifferent to his surroundings. His principal mood was one of depression, with an accent of sadness. He was seen to blush during a prolonged examination. He readily complied with most of the requests made to him. He was neat about his person. Answers were slow, monotonous, and monosyllabic. To many questions his reply was 'I don't know.' His speech was uneven, unsteady, somewhat lachrymose. On many points his memory seemed to be at fault, but on other occasions it was very good. He frequently contradicted himself. The same questions as to his age, and how he came to be placed in the asylum, etc., etc., were differently answered on different occasions. Most of his answers to questions showed discrepancies of this sort. On a few occasions he appeared to have hallucinations of a persecutory character.

"The personal history of this patient showed him to be a habitual criminal who had been imprisoned repeatedly for begging, vagrancy, assault, etc.

"Dr. Stover's report as to this man's mental condition is as follows: He was known as a worthless character since childhood, at first a vagabond and later a criminal. Despite the testimony of certain witnesses as to certain acts on the part of the patient which were suggestive of insanity, Stover cannot on that account alone pronounce him insane. Some of this testimony is not to be believed, while other parts do not agree. The assumption of insanity is not necessary to explain some of the conduct of the patient. It appears that after his conviction for bigamy, and in view of escaping the long penalty for that offense, he first conceived the idea of the simulation of insanity.

"This pretended alienation of the patient does not agree with any known form of insanity, but is full of self-contradictions. Such great and numerous discrepancies in his answers suggest simulation strongly. He kept his temper even during a most exasperating cross-examination, which is incompatible with insanity. Dr. Stover does not regard simulation of this sort as at all difficult of execution. Patient's

description of hallucinations is not at all like the accounts given by undoubted lunatics.

"The disparity between the two sides of the face as to innervation could be simulated, in the opinion of Dr. Stover, by voluntarily drawing the face to one side; and this effort could also produce the fibrillary twitching of the muscles. The report concludes with the opinion that the patient was not and never had been alienated in mind.

"As a sequel to this case it may be stated that, after numerous subsequent efforts to simulate insanity, the patient finally confessed the deception. He had served his term for bigamy, and, after an interval of freedom, had been committed for other offenses. After becoming well known in official circles as a simulator, he openly gave up all further attempts in this direction."

Objects of Worship as Chosen Weapons for Murder in Religious Mania.

"Homicide, suicide, mutilations accomplished with foul and cruel energy, and a certainty of aim which savors of automatism, are features peculiar to religious mania." So says Dr. Cullebre in the April number of *Archives de Neurologie*. He calls attention to the fact that the choice of means for accomplishing the fatal purpose has received little complete or careful study, although these deeds have so often a symbolic significance in the delusions of religious nature, in the train of which they form a part.

Renewing the sacrifice of Abraham, self-crucifixion in memory of the sacrifice of Christ, amputation of genital organs because of lack of chastity, or to assure a higher degree of perfection, are deeds not unknown among this class of patients. The chosen instrument may have a significance of mysterious or religious nature. A crucifix, a statuette, a rosary, has each figured in these cases.

The following cases are cited:

1. A woman of twenty-eight, of most marked neurotic family and personal history, who at this time was in a state of excitement and fear, hearing threatening enemies about her, and fearing that the devil was coming to bear her to the infernal regions, suddenly hears an imperious voice bidding her kill her four-year-old child, and seizing it she crowded a statuette of the Virgin into the child's mouth until it was dead of asphyxia. A long period of delusions of religious nature followed.

2. A bachelor of twenty-nine, who was seized with sudden fears that he was to be poisoned, that the world was damned, threatened to

kill his physician; and later, when his father, whom he had called to his bedside, had turned his back, he murderously assaulted him with a plaster statue of the Virgin, which he had in his hand.

3. A married woman of thirty-four was possessed of delusions of a religious nature of the depressive type, and suddenly tearing the Christ from a crucifix she crowded it into her mouth and swallowed it, making later other unsuccessful suicidal attempts, only to die finally as a result of her first suicidal act, declaring before death that she had swallowed the Christ only to exorcise the devil which had possessed her.

Expert Testimony.

That expert testimony can be creditable both to the State and the profession is attested by two articles in the April number of the *American Journal of Insanity*, which take up respectively the medico-legal study of the case of Amos D. Palmer, and the stigmata of degeneration here found.

The experts for both sides were engaged to seek for the truth and to tell the truth. They were not hired, as too often and discreditably appears, to give testimony favorable to one side only. After their various interviews with the prisoner and their careful studies of the case, a conference of the experts was arranged, and after thorough discussion the following report was agreed to and signed by all participating in the conference: "We, the undersigned, having examined Amos D. Palmer as to his mental condition, with reference to the indictment against him for the killing of his wife on the night of February 12, 1899, hereby report that we jointly agree in the opinion that he is the subject of mental disease, and that the act was committed under the influence of that disease; and in our opinion he is therefore not responsible for his homicidal act, and proper measures should be taken to protect him and the public from further consequences of his mental disease."

The history showed Palmer to have been the subject of epilepsy, and after careful study the diagnosis was reached and concurred in by the experts for both sides that this was a case of epilepsy with retrograde amnesia.

The experts for the State, in their report to the Attorney-General, express their belief that he was "irresponsible by virtue of mental incompetency and a state of unconsciousness and impaired will."

THE MEDICAL AGE

VOL. XVIII. DETROIT, NOVEMBER 25, 1900. No. 22.

ORIGINAL CONTRIBUTIONS.

SPECIFIC URETHRITIS.

BY W. A. HACKETT, M.B. (TOR.), M.C.P.S. (ONT.),

Professor of Dermatology and Venereal Diseases in the Michigan College of Medicine and Surgery, Detroit, Mich.

Of the three diseases contracted by sexual intercourse (*i.e.*, specific urethritis, chancroid, and syphilis), the most common and most venereal is specific urethritis. When more than one of these are present in the same individual at the same time, it is called "mixed infection."

Specific urethritis, also called gonorrhea, clap, blennorrhea or blennorrhagia, is an acute infectious process, attacking most frequently the mucous membrane of the urethra and the structures in anatomical relation with it. The mucous membranes of the mouth, the eye, the anus, and the rectum may also be the seat of the process.

Cause.—Irritating pus or secretion from one person to another, due to a microorganism. Neisser discovered the "gonococcus" in 1879, but this cannot be found in all cases. Clinically, there are cases just as severe and with as many complications in which no gonococcus is found. A man may contract a urethritis from the secretions from a lacerated cervix and perineum, or the secretions from the uterus and vulvovaginal secretions due to uncleanliness. The woman may be virtuous, but suffer from a diseased uterus, cervix, etc., which gives rise to an irritating discharge. The menstrual secretion is very acrid in character and often produces severe urethritis in the male. So we see there is still much to be learned about the etiology of urethritis.

The gonococcus of Neisser is a diplococcus. The gonococci are arranged in pairs, each half being kidney-shaped in appearance, with their inner borders in apposition. The entire coccus resembles a coffee-bean. They grow and increase in numbers very rapidly, each pair splitting into four, and are never arranged in chains. They are

found upon the epithelial cells, within the pus cells, and among and between these cells.

Staining.—After cleansing the glans penis, pass a sterilized platinum loop into the urethra to obtain the secretion for examination. Spread it in a thin layer on a clean glass slide. Dry in the air. Pass through the flame of an alcohol lamp. Add a drop of a dilute watery solution of methyl blue and leave on for two or three minutes; then wash off with distilled water. Dry and mount in Canada balsam.

The Course of the Gonococcus.—They increase rapidly in numbers, when deposited on the superficial layer of the urethra, and give rise to a slight serous discharge, which appears at the meatus. This discharge consists of serum and epithelial cells, upon and between which are the gonococci. In twenty-four to thirty-six hours the gonococci penetrate the cement substance between the epithelial cells and pass downward toward the subepithelial connective tissue layer. This stage is marked by a purulent discharge, which destroys and throws off the urethral epithelium, thus giving free access to further gonococci invasion. The purulent discharge contains pus cells, serum, and gonococci.

Diagnosis.—Non-infectious urethritis is usually due to trauma. Specific urethritis is easily diagnosed by the redness and swelling of the meatus, painful urination, the purulent urethral discharge, the period of incubation, and the presence of the gonococci. Chancre of the meatus or within the urethra gives rise to a slight serous or mucous discharge, and induration about the lesion can usually be detected. Chancroids of the meatus cause a purulent discharge, rusty-brown in color.

Prognosis.—The prognosis of specific urethritis is usually good if the patient is otherwise healthy and willing to carry out all the details of treatment. It is more obstinate before or about the age of puberty, in those who are overworked, and in nervous or scrofulous persons. It is a grave and far-reaching disorder, and serious complications are apt to occur in almost any case.

Infection.—(1) Direct infection. The gonorrheal pus is transferred from the genitals of one person to those of another during coitus. This is the usual and common mode of infection. (2) Mediate infection occurs when instruments, towels, dressings, or the fingers have been contaminated with the pus and then brought in contact with the meatus or some mucous membrane.

Symptoms.—These appear from one to six days after infection. Cases coming on late are not so virulent as those coming on in a few hours. Some are better in three weeks; others last six or eight or ten weeks. The first signs are: (1) Slight heat or tickling in the end

of the penis; (2) urethral orifice is redder than normal and has a slight discharge; (3) mucous membrane bulges out through the orifice; (4) burning sensation on urination, caused by the acidity of the urine or by the urine distending the inflamed urethra. The congestive stage lasts four or five days. Often there is no swelling of the glans penis. During the early congestive stage the discharge is slight and may be tinged with blood, which is a sign of resolution. A greenish-yellow discharge appears afterward and swelling subsides. Patient may complain of pain in the loins and back, with loss of appetite or vomiting. The skin may be hot and dry, with the temperature rising to 102° or 104° F., with restlessness. Painful urination is frequent, and the stream may be narrow and shoot out in different directions. If acute prostatitis be present, there will be constipation, pain most severe after passing urine, and sometimes retention of urine.

Chordee is most marked during the congestive stage, and is due to the bow-string connection of the corpus spongiosum and urethra. Erections occur often and are very painful, as the urethra, which is already distended, is put on the stretch. The penis becomes bow-shaped.

The second stage follows the acute congestion and might be termed the suppurative stage, as a thick yellowish or greenish-yellow discharge occurs, lasting one to three weeks. Painful urination is not so great now. During this stage the disease extends backward and occasionally reaches the prostate.

The stage of decline now follows, during which the pus becomes thin and whitish, like it was at first. The length of this stage depends chiefly upon the patient's conduct. The first attack is usually the worst, and one attack is said to predispose to a second. Sutton says that London policemen often have it nine times before being pensioned. The disease has a tendency to extend backward, but in mild cases is limited to the anterior two or three inches of the urethra. "High elevation" is not an unmixed good here, as it would increase the extension backward, and the prognosis is uncertain when the posterior urethra is involved.

Treatment of Acute Anterior Urethritis. — This is often unsatisfactory, as the same treatment is not beneficial in all cases. The abortive treatment is not recommended, as any local application which will abort it after twenty-four to forty-eight hours will injure the urethra. Some of the remedies used to abort it are carbolic acid (1 in 20), silver nitrate (20 grains to the ounce), potassium permanganate (one per cent), protargol, argonin, and peroxide of hydrogen. It is better in the early stage to treat on general principles, viz.: Rest

in bed if possible, or the use of a snugly fitting suspensory bandage; the penis should be kept very clean. The bowels should be relaxed by the use of small doses of calomel or pil. cathartic co. If the patient goes to bed, the diet should be reduced about one-half and should consist of water, bread, milk, eggs, and light puddings. No alcohol should be allowed in any form, and no vinegar, mustard, pepper, or spiced food. The use of tobacco should be prohibited; all stimulants must be stopped, and instead of strong tea, coffee, and cocoa, he should drink freely of water and lemonade. Mental and sexual excitement must be avoided. The acidity of the urine may be reduced by liquor potassæ or potas. citrate or potas. acetate. Heat favors the growth of the germs, hence the cold coil around the penis will have a good effect.

If the patient be in bed, he should not be kept very warm. He should be warned of the danger of infecting the eyes, and the gravity of such an accident. The best dressing for the penis is absorbent gauze, a piece about four inches square with a slit cut in the center, through which the glans is passed until the gauze is well behind the corona. The foreskin is then drawn forward, thus causing the free end of the gauze to protrude beyond the preputial orifice. This dressing allows the pus to drain freely from the meatus and keeps it from coming in contact with the prepuce and glans. If the prepuce be very short, the glans can be wrapped lightly in absorbent gauze. The dressing should be burned as soon as removed, and the hands washed to prevent infection.

To render the urine aseptic, the following is very useful in the early stages:

℞ Salol ..... dr. j.
Boric acid ..... dr. j.

M. Div. in capsuli No. xii. Sig.: One four times a day.

This may be given for four or five days, but should be stopped as soon as the urine becomes dark or smoky. To render the urine alkaline, alkaline waters may be given freely, or one of the following:

℞ Potas. bicarb ..... drs. iij.
Tinct. hyoscyam ..... drs. ij.
Aquæ ..... ad oz. iv.

M. Sig.: A tablespoonful in water after meals.

℞ Ext. pichi fl. ..... drs. iij.
Potas. acetas ..... oz. j.
Spts. æther. nitros ..... drs. ij.
Syr. simplex ..... oz. ij.
Aquæ ..... ad oz. viij.

M. Sig.: A tablespoonful in water after meals.

For chordee and painful erections the patient should empty the bladder before retiring and sleep on his side on a hard mattress, with light covering. When awakened by an erection, cold applications should be made to the penis. Cocaine solution (one per cent) may be injected into the urethra and retained for several minutes. In severe cases a few drops of tinct. opii may be given four or five times a day, or a large dose of sodium bromide or monobromide of camphor at bedtime. It is sometimes necessary to resort to suppositories of opium or morphine.

Injections should not be used until the acute symptoms begin to subside, which is about the end of the second week as a rule. The injections should be bland and non-irritating. The patient should be instructed in the use of the syringe, which should have a blunt conical tip and hold about four drachms. After urinating, he gently inserts the nozzle of the filled syringe into the meatus, with lips pressed together against the syringe. The solution is thrown in slowly until a feeling of distention or discomfort occurs, when it is allowed to escape, or is kept in for a few minutes. This should be done three times a day. Hot boric acid solution may be used first. The following are useful solutions:

℞ Zinc. sulph. ..... grs. vj.
Ext. hydrastis fl. .....
Glycerin .....āā drs. iv.
Aquæ .....ad oz. vj.
M.

℞ Zinc. sulph. ..... grs. x to xij.
Plumbi acetas ..... grs. vj to xij.
Ext. opii aq ..... drs. ij.
Aquæ .....ad oz. vj.
M.

℞ Protargol ..... grs. xxv.
Aquæ .....ad oz. vj.
M.

℞ Potas. permangan ..... grs. ¼ to ij.
Aquæ .....ad oz. vj.
M.

Great benefit will result from deep injections thrown into the bulb by the physician. A French soft catheter, No. 12, lubricated with glycerin, may be used, with four or eight ounces of warm medicated fluid. During the latter part of the acute stage, capsules of copaiba or copaiba and cubebs and methylene blue, or pure yellow santal oil, five to ten drops in a capsule, one and a half hours after meals, are very useful. In hospital practice these are too expensive, and Lafayette mixture is given. When the discharge becomes sticky in character, it is well to stop the use of these remedies, as they may

delay the cure by overstimulation of the urethra, and give instead a mild alkaline diuretic. If the treatment has been successful there is only a trifling urethral discharge in the morning, which soon disappears.

THE PATHOLOGY AND TREATMENT OF ANEMIA.

BY W. N. SHERMAN, M.D., FRESNO, CAL.

"The blood is the life," a familiar quotation, reminds us that the vital nature of the blood was known in Bible times, and hints in relation to it would seem to indicate a knowledge of the circulation of the blood before the discovery of Harvey in 1616.

"The life of the flesh is in the blood, and out of the heart are the issues of life." The circulation of the blood, whether known or not to Solomon, seems to be implied in the language put by the Holy Spirit into his mouth. Only an intimate acquaintance with the blood, its normal conditions and changes, can give an adequate conception of its interest, its strangeness, and its beauty, and demonstrate in a convincing manner its bearing upon the various ailments which come under our daily observation.

The blood holds in solution certain albuminous bodies and a number of mineral substances that might be called invisible constituents, the study of which belongs to the physiological chemist. In addition, it holds in suspension certain visible bodies, the red and white corpuscles, which are open to direct inspection. The study of these latter elements, their form, color, size, number, and relative proportion, are the histological factors with which we are concerned. The chemistry of the red corpuscles is complex, and in some respects still unsettled. Its most important ingredient, hemoglobin, possesses brilliant optical properties, and is the only proteid of the body containing iron. It is the blood constituent that conveys oxygen to the tissues, and is characterized by the readiness with which it absorbs and parts with oxygen. In arterial blood it exists as oxyhemoglobin, in venous as reduced hemoglobin, easily distinguished by the spectroscope. It is crystallizable and easily obtained from the blood of man and of animals. It is the vital element of the blood, always present, and when slightly reduced below the normal results in functional disorder, and if extreme, in grave and irreparable organic lesions. The absence of this substance from the blood, in greater or less degree, is the cause of the various forms of anemia.

Next in importance are the blood corpuscles, the white being a large spherical mass of granular nucleated protoplasm, existing in the normal proportion of one white to five hundred red. Other morpho-

logical elements that concern us in this discussion are the hematoblasts of Hoyem, whose functions are concerned in the production of fibrin.

The microcytes, much smaller bodies than the red corpuscles, contain abundant coloring matter, and are numerous in the idiopathic and pernicious forms of anemia. I have thus outlined these constituent bodies of the blood to elucidate my subject and to emphasize their relative importance in the subject I am about to consider, for the functional power of the blood depends wholly upon the number and quality of its red corpuscles, and when a deficiency exists the tissues suffer for want of oxygen, the most nutritive element of the body.

Anemias are properly classified with reference to their origin. Anemia resulting from nutritive disturbances in the blood, to food supply, digestion, absorption, and the direct loss of blood by hemorrhage, as causative factors, might be called secondary, while the primary include chlorosis, leucemia, and pernicious anemia, and a third, suggested, to include those forms resulting from the effect of toxic substances in the blood, namely, toxemia. I cannot hope to cover the extent of the subject, including all the varieties, but will consider briefly the two forms most frequently encountered, viz., chlorosis and idiopathic anemia, for the blood changes, symptoms, and chemical features, as well as the treatment, apply largely to other and graver forms of this disease.

Duncan in 1867 demonstrated the number of corpuscles, and reduced hemoglobin in chlorosis. Henry denies that this condition is peculiar to that affection. By chemical analysis Rodier and others detected conditions thought to be pathognomonic—a normal proportion of albuminates in chlorotic blood—while in the blood of anemia in general they are diminished.

Immerman adopted this as a distinguishing trait of chlorosis, regarding it as an affection *sui generis*, deprecating any attempt to merge it into "the great ocean of anemias." Duncan found variation in the numerical relation of the corpuscles and hemoglobin, and concluded there were two varieties. Virchow attempted to establish the existence of a congenital diminished caliber of the blood-vessels, while Coupland claimed this to be the result of lessened blood quantity. We observe the obscurity surrounding the subject, from an anatomical and chemical standpoint, and the same in regard to its chemical history.

Pathology.—The pathology is also obscure; our knowledge of the physiology of the blood, the origin, development, and destination of the red corpuscles, is involved in so much doubt as to render it impossible to discover its pathological secrets. It is obvious that something

concerned in the development of the red corpuscle is a cause, or some distinct agent exists, for the prominent feature, diminution, must be due to one or both of these causes.

Probably much of the confusion concerning the subject of chlorosis is due to the persistence in regarding it as a disease *sui generis*, distinct from all other forms of anemia. The fact that it is an affection encountered during puberty is explained by the urgent physiological demand upon the blood at that time, and only in vigorous individuals is that demand supplied, while in others who fail to meet it the anemia declares itself. All the varieties of anemia are characterized by a diminution in either the number or value of the red corpuscles—that is, the normal quantity of hemoglobin.

This change is the morbid condition looked for. We have not failed to observe certain predispositions to anemia depending upon sex, age, and constitution. Anemia is an easy condition to diagnose. If marked by the usual symptoms, one may guess it at a glance. How often we see the pallid, death-like face in girls or young women, who seem to be in good physical health, and pursue their daily duties with seeming indifference to their real condition. Anemia is sometimes congenital, and such cases are not infrequently met with. The large proportion of cases, however, are in young women during the age of puberty, and sometimes later on. The physical condition seems undisturbed, the subjects retain their plump and healthy form, the weight is not materially affected. In most cases of any severity there is a daily febrile condition of a mild type. This is the so-called anemic fever.

In the severe forms of anemia cardiac disturbance and extreme emaciation masked by edema may be present.

Anemia as a rule is not recognized clinically until the hemoglobin represents but three or four million corpuscles per cubic millimeter, but their real value may be only fifty per cent of the normal. In this degree of anemia none would have the signs and symptoms, such as pallor, vertigo, flushing of face, tinnitus aurium, backache, irregular appetite, ill temper, etc. Should the corpuscles fall below or approximate two or three million, we should have an increased amount of hemoglobin, with a large decrease in the number of cells. It is a familiar fact to all students of blood diseases that as the number of corpuscles diminishes the percentage of hemoglobin increases, until in the severe forms it may equal or exceed the percentage of red corpuscles. A number as low as 3,000,000 per cubic millimeter denotes a grave form of anemia. In the pernicious form the increase in size of the corpuscles seems to be conservative, a compensation by nature, for they will carry as much hemoglobin as double this number in nor-

mal corpuscles, and hence the enlarged and distorted corpuscles are suggestive of a grave condition.

It is well to remember that an anemia may not be considered grave until the corpuscles have undergone distinct alterations as to size and shape. In the most severe form the number of the corpuscles varies from 500,000 to 2,000,000 per cubic millimeter. This degree is suggestive of disease of the blood-making organs, the spleen, lymph glands, or bone-marrow. Then in the grave forms we have always an increased size and lessened number, while in chlorosis we have generally a diminution in size, combined with an increase in number. It is an established fact that the amount of hemoglobin in two red corpuscles from different individuals may differ as much as fifty per cent, so that the number of corpuscles does not afford a reliable test of the presence or absence of anemia.

When below the normal average anemia may be determined by a simple count, but its degree is only determined by the percentage of hemoglobin, the reduction of which may be greater than that of the corpuscles.

When the number of corpuscles is not far from normal, or greater than normal, this test is superior. As between two tests, in such cases, the color test is to be preferred. In an examination of the blood it is important to determine the functional value of the red corpuscle, which bears a close ratio to the amount of hemoglobin in each.

As a rule there exist normal relations between these two important elements of the blood, but cases are observed where this ratio is greatly disturbed, and there may exist a condition showing 6,600,000 corpuscles per cubic millimeter with only forty-five per cent normal hemoglobin, making their functional value equal only 2,970,000 normal corpuscles.

These facts are generally well understood, and I repeat them only as a reminder of their importance for clinical purposes.

It is asserted, and no doubt with truth, that those who practice making frequent examinations of the blood of their patients encounter and diagnose diseases not found by others.

In the diagnosis, the use of the hemoglobinometer is as important as the microscope; the modern instruments now supplied are all that could be desired. A microscopical examination may be made quickly and at the bedside if desired, and affords the means of deciding promptly the probable form of the disease present. Instruments for estimating the number of corpuscles per millimeter are also of the greatest value, but the microscope is the instrument of great importance, and a frequent use of it is of great value in both the diagnosis and treatment. By this means the blood changes may be accurately observed, the corpuscles estimated, and their size, shape, and color

determined. This may be done without staining the corpuscles, and it is a good plan to make the first examination with a comparatively large quantity of blood to determine the tendency of the corpuscles to form rouleaux. It is well to remember the distinguishing characteristic of chlorosis, namely, greater deficiency in hemoglobin in the blood, in proportion to the diminution of red corpuscles. This condition does not obtain in idiopathic anemia. The corpuscles vary greatly in size, and while the average is below the normal, some are above.

As the severity of the symptoms increases, and in cases approaching the pernicious form, we observe a greater number of large corpuscles. Another characteristic is that the corpuscles have a tendency to assume an oval form, and the more severe the type the greater the number of corpuscles having this shape. In most cases, if at all severe, we shall find a mild fever; it is the usual condition in all severe cases; the so-called anemic fever. It is often difficult to obtain blood from the finger or ear for examination, but after cleansing the tip of the finger, lowering the hand, and applying a string or rubber band, we can prick the finger with a fine needle and get a sufficient supply, by means of the artificial congestion. It is better, however, to obtain the blood from the ear if possible. The edge of a clean slide is touched upon the exuding drop, then gently drawn across a clean cover-glass; this method distributes the corpuscles nicely upon the cover-glass, and so thinly that they dry quickly before they have time to become crenated. They may then be fixed and stained by the usual methods for preservation or future reference. As to staining, it is best to adopt some one of the many useful formulas for double staining and stick to the one that gives best results. I use a red stain for the red corpuscles, and a dark green for the white. This gives a nice contrast, and may be easily photographed by using a Carbutt orthochromatic or color sensitive plate.

It is an excellent plan after beginning treatment to keep a series of slides showing the progress of the case, and this has been my practice for the past ten years. I can now view these various slides and recall the individual case to which they belong, even without a label, so vividly were they fixed upon my mind.

In the treatment of severe anemia I should place rest as of first importance. I have seen many cases where all therapeutic treatment had failed, and when placed in bed for a while the patient would respond quickly to medicines. Attention to the secretions, the diet, the skin, the mental condition, is all-important. The great therapeutic agent, and the one of the greatest virtue in these diseases, is the Blaud pill of ferri et potassium carbonate; no other preparation of iron can compare with it. We have here a notable example of what Fothergill

advocated long ago, namely, that iron, to be efficient, should be combined with an alkaline salt of some kind, preferably potash. Niemeyer claims that he laid the foundation of his large practice through the use of this formula.

The next best agent is arsenic. The improved Blaud pill contains this article, and it is a very desirable combination. In severe cases oxygen by inhalation is good. Protonuclein and the thyroids may at times prove efficient. It is probable that the milder forms sometimes pass into the severe types if not arrested, and it is important to begin treatment early and pursue it energetically.

DEATH FROM EMBOLUS IN FORTY-FIVE MINUTES, WITH AUTOPSY.

BY BYRON ROBINSON, B S, M D., CHICAGO.

Dr. J. Leu Sutherland, of Grand Island, Nebraska, brought me a patient, forty-six years old, who had suffered for years with a pelvic inflammatory process. She was extremely ill at the menstrual periods. Careful investigation revealed pus in the urine, temperature 99°, pulse 85, and respiration 19.

I performed a hysterectomy *per vaginam*, and found a hypertrophic myometritic uterus. The oviducts and ovaries were surrounded with adhesions, which were broken up, but the organs not removed. An extensive jelly-like edema was found in the cellular tissue between the uterus and bladder. The patient made an uninterrupted recovery, except that she complained of pain in the back. She ate and drank and slept comfortably well.

On the seventeenth day I visited her, when she complained of pain, especially in the right leg and thigh, and some pain in the back. I examined the right sciatic nerve from quadratus femoris to foot, but no pain was elicited. I then examined the anterior crural and the obturator, and found some tenderness along the obturator nerve. To test whether the sciatic nerve was at fault, I bent the thigh on the abdomen and straightened the leg well on the thigh, so as to put the sciatic nerve moderately well on the stretch, and found no pain. About two to four minutes after I quit examining her she screamed out with pain in the chest. The pulse increased to 120 and 140. She turned pale and began to breathe quite regularly at about 47 times a minute. The paleness increased; the pain also increased. The breathing remained about 47 per minute, and she died in forty-five minutes after the attack of pain.

She was a private patient, but through Dr. Sutherland's vigorous efforts we secured an autopsy, and found large clots of blood partially

filling and obstructing each of the pulmonary arteries immediately at the division from the pulmonary vein. The emboli were whipped fibrin mixed with coagulated blood. The left ovarian vein was filled with a fibrous coagulum from distal end to renal vein, about the size of a thick lead-pencil; it was well molded to the venous wall. The left kidney contained an elongated renal calculus, which was of course the origin of the pus in the urine. The gall-bladder contained about 150 hepatic calculi, from which no symptoms arose. The remarkable feature of this case is that the *left* renal calculus should cause the severe pain in the *right* thigh and leg.

OBSERVATIONS.

1. The renal calculus had infected the ureter and almost the entire adjacent ovarian vein demonstrable to the eye and palpation.

2. The ovarian phlebitis was doubtless the cause of the formation of the long, large thrombus in the ovarian vein.

3. The fibrin-like mold of the thrombus in the left ovarian vein with blood coagula showed that the thrombus was formed gradually and irregularly through a considerable time (seventeen days after the operation).

4. The emboli must have been floating occasionally but irregularly into the bifurcated branches of the pulmonary artery.

5. No thrombi could be found in other veins than the left ovarian.

6. The emboli found in the pulmonary artery immediately at its bifurcation presented no blood coagula, but a grayish-red fibrin.

7. Doubtless large infected emboli floated into the pulmonary artery at least three times during the seventeen days, as the temperature suddenly rose to 102° to 104° (rectal) three different times, with pulse 120 to 130, and the respiration ran 22 to 26 at those times.

8. The characteristics of this awful calamity were: (*a*) sudden pain in the chest; (*b*) increasing paleness of the face — the mucosa presented distinct blueness; (*c*) rapid respirations, 47 per minute, but regular until death; (*d*) death occurred in forty-five minutes.

9. Doubtless the movements consequent on examination broke up some thrombus and started the emboli to float toward the pulmonary branches, where seventy-five per cent of emboli lodge.

10. The patient suffered terrible pain until death.

11. The lesson from this unfortunate disaster teaches that operated patients should remain quiet for a sufficient time after an operation.

12. It would appear from this case that phlebitis (sepsis) and slowing of the blood-current create a tendency to thrombi, and trauma breaks up the thrombi, which then become floating emboli.

SYMPTOMATOLOGY AND TREATMENT OF EXOPHTHALMIC GOITRE.

BY CARL W. RUMMEL, M.D., WEBSTER CITY, IA.

The symptoms and signs of this disease may be divided into four classes: (1) Those referable to the thyroid; (2) those to the heart; (3) those to the eye; and (4) those to the nervous system.

The name would imply that goitre is invariably present in the disease, but this we now know not to be a fact. Cases showing the other symptoms in the most aggravated form may present no enlargement at all, or enlargement of only a very low degree. Thus there will occasionally be seen cases with pulse ranging from 120 to 140, with exophthalmus and nervous symptoms of severe degree, which show practically no enlargement of the thyroid. When of a severe grade, the goitre is generally of the pulsating variety. The pressure of the enlarged thyroid upon the trachea produces dyspnea of a varying degree. In rare cases the enlargement is unilateral and more frequently unsymmetrical.

The symptoms referable to the heart are perhaps the most constant feature of the disease. The pulse-rate varies in different cases from 90 to 140 or even 160, and few are the cases which do not exhibit at least a mild degree of tachycardia. Aside from its rapidity, the pulse is strong, irritable, and irregular. Following upon the increased rush, the heart hypertrophies and in rare cases dilates. Numerous cases have been reported showing organic murmurs, but careful inquiry generally shows a history strongly suspicious of a previous endocarditis.

Of the eye symptoms exophthalmus perhaps is most frequently seen. To account for this, there has been found post mortem dilatation of the vessels of the orbit, although a few cases have shown only an increased amount of fat. As the eye is projected forward, the palpebral fissure is enlarged and the sclerotic shows above between the upper eyelid and the iris — the sign of Stellwag. Von Graffe observed that as the eye follows an object from above downward, the eye moves more rapidly than the upper lid; this sign, however, is not invariably present. Moblus drew attention to the fact that many cases show an inability to converge the eyes for a near point. Corneal anesthesia has been observed, also paralysis of the muscles of the eye.

Tremor is said to be present in ninety per cent of the cases. It closely resembles the tremor of alcoholism, and is only detected by having the patient extend the arms and separate the fingers. There is present that group of symptoms included in the term "nervous-

ness"—the patient is irritable, easily excited, emotional, sometimes bordering on the hysterical. Later in the course of the disease the mentality may be weakened. Sweats, sometimes local, sometimes general, occur, and may affect only one side.

Other symptoms observed are polyuria, nausea, diarrhea, edema, emaciation, fever, and pigmentation closely resembling that of Addison's disease.

The treatment of any disease will depend much upon its pathogenesis, so we may well pause to consider the theories that have been advanced as to the causation of the disease. Two theories mainly present themselves: (1) hyperthyroidization; (2) disease of the cervical sympathetic or its center within the cord.

It has long been held that the symptoms of Graves's disease were caused by an excessive secretion of the product of the thyroid gland —the opposite of the condition that obtains in myxedema—but later research would seem to point to the possibility of another solution of the problem, and that the disease in the future will be classed with those of the nervous system.

Edwards has shown that irritation of the cervical sympathetic in monkeys produces four phenomena: (1) Ptosis; (2) dilatation of the pupil; (3) widening of the palpebral fissure; and (4) hypertrophy of the thyroid—the latter only on more prolonged stimulation, while on division of the sympathetic opposite results are obtained. Thus it has come to be a part of our knowledge that within the inferior cervical ganglion of the sympathetic we find the accelerator fibers of the heart and the vasodilators of the thyroid and carotid arteries.

As further substantiation of the nervous theory may be cited the post-mortem findings. These consist of a degeneration of the cord in those areas commonly given as the centers of the accelerator and vasodilator fibers alluded to. Again, late in the course of locomotor ataxia, general paresis, paralysis agitans, and syringomyelia, Graves's disease has been known to develop, and it is easy to conceive that as the degeneration incident to these diseases progresses the centers of the cervical sympathetic in the cord are affected and the phenomena of Graves's disease develop.

The supporters of the hyperthyroidization theory claim that the toxins circulating in the blood as the result of the excessive secretion of the gland act by selection on the centers in the cord, but it would seem somewhat peculiar that the toxins should act on the vasodilators of only the thyroid and carotid arteries. It would be still more difficult to explain those cases with hyperhidrosis and disease of the eye and thyroid on only one side of the body.

No one theory as yet entirely explains all of the symptoms, but to

me the nearest approach seems that classing it as a disease of the nervous system.

The treatment may be divided into medicinal and surgical; the latter again into procedures directed to the thyroid and to the sympathetic.

It has been claimed that the disease is the result of absorption of toxic substances from the gastrointestinal tract, and cases have been treated along the line of intestinal antisepsis—salol, bismuth salicylate, menthol, with high irrigations.

In this day of serum therapy, advocates of a serum treatment have not been wanting. Working upon the theory that the disease is the opposite of myxedema, patients have been treated with the serum of goats upon whom thyroidectomy had been performed, and some of the cases have shown improvement. Others go further and employ extract of adrenals (suprarenal), and still others extract of thymus.

Exhibition of ergot has given good results. In cardiac cases sparteine sulphate, 1 grain, and picrotoxin, $\frac{1}{40}$ to $\frac{1}{60}$ grain, have given the best results. Strophanthus should be tried, as many cases will show a marked improvement when placed on a long course of this drug.

In cases showing fibroid degeneration, the alteratives may be found of value. Of general measures may be mentioned rest, diet, attention to emunctories, and general hygiene.

Of measures directed to the thyroid, iodine inunctions should first of all be tried. By reducing the size of the gland, this measure has relieved the dyspnea caused by pressure upon the trachea, and by lessening the irritation of the sympathetic, has had a favorable influence on the tachycardia. As a more radical measure, ligation of the arteries supplying the gland should be tried. In cases showing marked dyspnea, thyroidectomy is surely one of the legitimate procedures. The operation, too, frequently affords relief from the tachycardia and exophthalmus.

Doubtless galvano-faradization of the cervical sympathetic and pneumogastric with the descending stable current is one of the most successful of the less radical measures. But if none of these procedures should prove of value, resection of both sympathetics should be done. While it is one of the most recent procedures, the results obtained surely justify its use, many cases upon which the operation has been done showing complete recovery.

In Denver, Colorado, an ordinance will be added to the laws governing the city making it compulsory for adults to be vaccinated. At present the law pertains only to children.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

THE DANGERS OF HOLY WATER.

The sources of accidental poisoning are continually being found in unexpected places. In an Austrian contemporary is mentioned the following interesting case:

An estimable citizen of Holland named Bruns went with his little seven-year-old son to church. A few minutes after they had entered the son complained of pain in his left eye, and on being asked the cause of the trouble said that as he crossed himself on entering the church a drop of holy water had entered the eye, and that it was now very painful. The father took the boy to the family physician, who applied simple remedies, but instead of improving the eye became worse, and a panophthalmia of alarming virulence ensued. The boy was taken to Professor Snellen, of Utrecht, the celebrated ophthalmologist, and after several painful operations he finally recovered. A bacteriological examination of this water revealed a state of affairs which easily accounted for this sepsis. In addition to all sorts of decomposing substances, fibers, and so forth, pathogenic bacilli were found in abundance. Large numbers of fecal bacilli were present, and the septic character of the water was shown to be of the gravest kind.

How easily holy water can become contaminated is readily seen. In Holland as elsewhere poor people in restricted circumstances, and in whom cleanliness is not a cardinal virtue, use the water daily. A poor mother makes her beds, washes and dresses her baby, probably adjusts its diaper, and then possibly without washing her hands goes to church. The result can only be one way.

It is said that the case above recounted has been the means of the invention by a young priest of a receptacle for holy water, whereby it shall escape drop by drop, and so avoid the infection which must be brought it by the unclean hands of the devout and pious-minded wor-

shipers. The Bishop of Utrecht is also said to have given his sanction and approval to this salutary and hygienic reform.

The medical press has frequently called attention to the dangers which may lurk in the common communion cup, from its use by syphilitics, diphtheritics, and others. It is of course a grave and difficult matter at times to suggest modifications in the established order of things ecclesiastical, but it is to be hoped that the cause of cleanliness may find some way in which to become triumphant.

EDITORIAL NOTES.

Consanguineous Marriages.

Consanguineous marriages are thought by a recent writer upon the subject to be undesirable, not because they originate disease, but because they intensify existing disorders or diathesis. It being almost impossible to find a family without taint, we rely upon the process of natural selection to counteract the bad effects of this taint. Close selection should therefore be discouraged. If the diseased and degenerate insist on getting married, it is their duty to posterity to mitigate their innate unfitness by the selection of suitable consorts. The practical inference from this seems to be that the feeble must marry the robust, and the neurotic the level-headed, but at the same time the robust should not marry the feeble-minded or the level-headed the neurotic. Nature is essentially haphazard in her workings.

A New Method of Diagnosis in Cerebro-spinal Meningitis.

The resources of the diagnostician will possibly be augmented through some researches now in progress by Widal and Sicard. The cystoscopic appearance of the fluid in cerebrospinal meningitis will probably furnish better information than that which has hitherto been furnished upon culture after a Quincke puncture. The cerebrospinal fluid has for its function the protection of the nerve elements. Its mobility is indispensable to the part it plays. It should therefore contain neither albumin nor fibrin. In disease it is asserted congelation occurs more rapidly than under normal conditions, and this fact will ultimately furnish a diagnostic method.

ITEMS AND NOTES.

Reports for 1899 show 15,633 insane persons in Scotland.

The court physician to the Ameer of Afghanistan is Miss Lillias Hamilton.

Smallpox has broken out in a number of the Indian reservations in the West.

A malignant form of typhoid fever has developed in an epidemic form at Brazil, Indiana.

Many smallpox cases are reported in certain districts in Michigan, but there have been few deaths.

Mrs. D. E. Erxlaben, the first female medical graduate in Germany, received her degree in 1754.

During the session of 1899–1900 there were nearly 7000 students of medicine in attendance at the various Italian universities.

Dr. Roswell Park, of Buffalo, has been appointed medical director general of the Pan-American Exposition to be held in Buffalo in 1901.

The editor (Dr. Kotlyar) of the Russian medical journal *Ejenedelnik* died on October 7. He was privat-docent of pharmacology at St. Petersburg.

The *American Journal of Nursing* is a new publication issued by J. B. Lippincott & Co. It will be the organ of the trained nurses of the United States.

Some time ago an institution was opened in Belgium for the purpose of carrying out a cure for tuberculosis by an exclusive raw meat diet. After an existence of not quite three months the experiment has been abandoned.

The heirs and legatees of Dr. T. W. Evans have reached an agreement to have the estate settled in Philadelphia. About $3,000,000 will become at once available for the construction and foundation of the dental institute in that city.

Professor Rieder, of Bonn, who has been given charge of the reorganization of the Turkish medical department, met recently with a serious accident in Constantinople—a fall of forty-five feet, involving njury to the spine and fracture of a foot.

Dr. R. A. Witthaus, of New York, will have to sue for his bill for examining the stomachs of Mrs. Catherine J. Adams and Henry C. Barnett, which he made on the direction of the district attorney in the Molineaux case. His bill amounts to $18,550.

Recent official statistics have shown a great decrease in the birth-rate in Berlin. The number of children born during the period covered by the statistics was 450,000, which, if the birth-rate had been the same as in the whole of Prussia, would be 700,000.

The Russian government has imposed two special taxes for the benefit of the Red Cross Society, which it is estimated will yield nearly half a million dollars per annum. One is a tax upon licenses to travel abroad, and the other a tax on railroad tickets.

A short time ago an aged medicine man, and chief of the Yakima tribe in Yakima, Washington, was stoned to death by an Indian. The medicine man had been called by one of his tribe to save a child who was sick. The old chief went through the usual barbaric formalities as best he could, yet the child died.

In his annual report to the Secretary of War, Surgeon-General Sternberg says that the present medical staff, consisting of 192 surgeons, is insufficient for the needs of the service in view of the large number of coast defense stations and the troops operating in Cuba, Hawaii, the Philippines, and Porto Rico.

Christian scientists of Baltimore, says an exchange, are scandalized over the action of one of their leading healers, who is just recovering from a severe illness. The young woman who has brought reproach upon the cause did it not only by getting sick like ordinary mortals, but by calling in a physician as other human beings do.

The new laboratories at Manguinhos, Brazil for the production of plague serum and vaccine are completed and are models in every respect, the *Brazil Medico* asserts. The different pavilions are on separate hills, about 1500 feet apart, with the building for the horses in the valley between. The entire establishment is in charge of Profs. Pedro Affonso and Oswaldo Cruz.

The funeral of Prof. Edward Albert, of Vienna, was a most imposing function, thousands being in attendance from all parts of Austria-Hungary. Several hundred floral offerings were received from various societies, and delegations attended from all the various medical organizations in Vienna and from all the more important medical societies in the kingdom.

The Italian Minister of the Interior has, according to an exchange, invited competition for a plan of a sanatorium for poor tuberculous patients. He has recently nominated a committee to examine the plans. It includes the names of Professor Bizzozero of the University of Turin, Professor Durante of Rome, Professor A. de Geovanni of Padua, Professor A. Ballori, director of the Hospitals of Rome, besides those of several well known architects and engineers.

In Chicago, says the *Philadelphia Medical Journal*, during the last twelve months 7000 schoolchildren have been carefully measured and tested, and it has been found that size and strength of body give an indication of proportionate brain power. Pupils, twelve years of age, in the eighth grade average five inches more in height and proportionately more in weight than second-grade scholars of the same age, and it is a reasonable deduction that brain power and size and strength go together.

The Berlin Society for "Kitchens for the Sick" has opened its first establishment, and hopes to supply a widely-spread want by sending out invalids' food to patients' own houses. The arrangements are extremely practical and well thought out in every detail, thanks to a committee of philanthropic and experienced ladies, and above all the energetic lady president, Frau vom Rath. Packed in modern "thermophore" apparatus the prepared food will reach the invalids' houses without losing heat. The scale of prices is extremely moderate.

It is stated in Washington, says the *Medical Record*, that plans are under consideration for the establishment of a first-class sanatorium within convenient distance of Manila, in order to place that city on the same footing in that respect as other large cities in the Orient. A sanatorium is regarded as necessary for dwellers in the tropics. The place selected is Beago de la Trinidad, about four thousand seven hundred feet above sea level, with a salubrious climate, the thermometer never rising above 75° in the daytime, and the nights being cool and exhilarating.

The Mexican government a few years ago made a standing offer of $100,000 to the discoverer of a remedy for yellow fever. Dr. Angel Bellinzaghi, of Vera Cruz, has been conducting recently a number of experiments, under the auspices of the government board of health. The commission appointed by the board to witness the experiments has reported favorably, and the physician will be given part of the prize at once. He has been asked to make further experiments in various forms of the disease at Vera Cruz, and if they are successful he will win the entire prize.

FEMALE medical students, says the *Journal of the American Medical Association*, have been admitted to the German universities this year, and 618 have attended the lectures, but only nine have thus far entered as regular students. The women are even favored above the men at present, as certain work at a foreign university is credited to them in the State examinations. In Austria the authorities have decided to admit women also, on the same terms as men in every respect, with the new scholastic year. Among the 850 students at Zurich, 214 are women, and 128 of these are studying medicine.

CHOLERA has, according to the *Philadelphia Medical Journal*, always been exceedingly virulent and fatal among Indian coolies employed by tea-planters, especially those who labor on shipboard. At first they would not submit to treatment, but the advantages of inoculation have become so apparent that they now seek it of their own accord, and the tea-planters are inserting special clauses in their contracts calling for inoculated coolies in preference to any others. In some of the tea districts, in which the mortality used to be very high, cholera has practically been exterminated. Notes on a series of experiments, carried on in Calcutta, show that the results, considered as a whole, were as follows: 654 uninoculated, 71 deaths; 402 inoculated, 12 deaths. Proportion, 3.63 to 1; reduction of mortality by 72.47 per cent.

THE *Philadelphia Medical Journal* is authority for the following: At Odessa the liman cure is becoming popular. The limans are sheets of water that have been isolated from the sea and converted into salt lakes. The waters are concentrated by evaporation and are thought to possess great therapeutic value. The principal salts contained in them are the chlorides of sodium, potassium, and magnesium; calcium sulphate and magnesium, or sodium bromide. A black, slimy substance of animal and vegetable composition covers the bottoms of the lakes, which contains iodine, bromine, sulphur, sulphuretted hydrogen, and oleic and valerianic acids. Patients bathe either in the open lakes or in baths with the water at different degrees of concentration and temperature. The diseases treated are rickets, scrofula, chronic rheumatic affections, and certain chronic skin diseases.

THE Paris correspondent of *The Lancet* says that at the Congress of Hygiene Dr. Phicque, physician in charge of the sanatorium in Agincourt, proposed the establishment of an additional tax upon alcohol, of which the profits should be applied to the expenses of the fight against tuberculosis. An additional penny (decime) to the present tax of 156 francs per hectoliter would bring in 25,000,000 francs

per annum. The French duties are at present much lower than the American, 245 francs; the Dutch, 252 francs; and, above all, the British, 477 francs per hectoliter. The creation of the "tubercle duty" upon alcohol would, according to Dr. Phicque, be perfectly justifiable, for alcoholism is the principal cause of pulmonary phthisis. With the 25,000,000 francs which the duty would bring in, sanatoria could be built, and all the expenses, which are very high, of disinfecting unwholesome houses could be defrayed.

Commander Webster, U. S. N., says (*Scientific American*) that in physical appearance the natives of China vary widely from extreme north to south. While our experience in the United States leads us to think that the race is small and undersized, a brief residence in the northern provinces of the empire will go far to dispel this impression. At Chefu, Taku, and Tien-Tsin one is struck by the stalwart appearance and height of the natives. At the first named port large numbers of the men are six-footers, and among the boatmen of Chefu it is no uncommon thing to see a native over six feet in height, weighing nearly or quite two hundred pounds. In the south, however, the average is more nearly accordant with the specimens we encounter as laundrymen, gardeners, and coolies generally in the United States. The cue or pigtail by which Chinamen have become so well known is the visible mark imposed by their Manchurian conquerors in 1644. Notwithstanding the length of years since the imposition of this mark of subjection, there are large numbers who resent the cue.

The David Lewis trustees, who have the disposal of a large sum of money left for public charities, are engaged, the *British Medical Journal* states, in completing arrangements for a munificent gift to the public, representing a sum which may possibly approach £100,000. There were negotiations a year or two ago between the trustees and authorities of the Southern and St. Mary's hospitals, Manchester, with a view to the presentation to the city of a hospital for women, which was to cost about £60,000. These negotiations fell through, but the trustees have now decided to purchase a considerable estate at Warford, near Manchester, where preparations are being made for the erection of extensive buildings for the accommodation and treatment of epileptics. Every effort will be made to produce a thoroughly efficient modern institution in which the most advanced scientific treatment may be given. The new colony will not be designed for the reception of pauper patients, and will be distinct from the undertaking of a joint committee of the Manchester and Chorlton unions, which is said to contemplate the erection of a hospital to accommodate about one thousand epileptics and imbeciles.

The Board of Health of New York, according to the *Philadelphia Medical Journal*, has prepared plans for a bacteriologic laboratory in which bubonic plague germs are to be cultured. It will be constructed of steel, with solid asphalt walls. There will be neither chimney nor windows. The lighting will be by electricity. The cost of the structure will be $25,000. Two cases of plague have been treated at quarantine during the last year, and the city is totally unprepared to meet the emergency that would be occasioned by its appearance. Every precaution will be taken to safeguard the workers in the laboratory. Several deaths have occurred from plague among the laboratory workers in Lisbon and Vienna during the last two years. Having these fatalities in mind the Board of Health did not regard any bacteriologic work in relation to the plague as safe in the general laboratories throughout the city. The diagnosis and the treatment, preventive and curative, of plague rest almost entirely upon the result of bacteriologic investigation. It therefore becomes necessary that the facilities for carrying on such work shall be unexceptionable; and at present the department does not command such facilities.

Loeffler (*Public Health*) has already advised the destruction of field mice by means of cultures of bacteria of bacillus typhi murium mixed with food, and the method has been carried out on a practical scale with some success. Danysz has used cultures of another species of bacillus in a similar way for the destruction of rats in the public sewers in Paris. The bacillus employed is one which Danysz isolated in investigating a spontaneous epidemic which occurred in field mice. When freshly isolated the organism was pathogenic to a certain extent for gray rats, killing about two or three out of every ten animals inoculated. It was found possible by artificial means to increase the virulence for rats to a much higher degree. The method employed for exalting and fixing the virulence was as follows: A mouse was first killed by an ordinary inoculation; broth cultures from the mouse were then enclosed in collodion capsules, which were kept in the peritoneal cavity of a living rat for thirty-six hours. At the end of that time a subculture was made in broth and then passed through another mouse. This process having been repeated four or five times, the culture was passed first through the more susceptible young rats and then through adult rats. In the end a culture highly pathogenic for both the gray rat and the black rat was obtained. Pieces of bread soaked in broth cultures of the bacillus were then laid down in the sewers, and by this means a large number of rats were killed.

NEW PUBLICATIONS.

REFERENCE HANDBOOK OF THE MEDICAL SCIENCES.

The profession will hail with satisfaction the decision arrived at by the enterprising firm of Wm. Wood & Co. to attempt the republication of the Reference Handbook of the Medical Sciences. The length of time which has elapsed since the first issue makes the word "republication" a misnomer, as the progress of the medical sciences has in reality entailed the rewriting of the work. The first volume commences with "Aachen" and ends with "Bladon Springs." Under such titles as "Amputation" and "Bladder" voluminous articles appear. The work will be a perfect treasure-trove for the physician, and it is to be hoped that a task involving such energy, industry, and expense will be recognized as an enterprise entitled to the fullest rewards of merit.

A Reference Handbook of the Medical Sciences. Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M.D., New York City. Volume I. Illustrated by Numerous Chromolithographs and Four Hundred and Ninety-eight Fine Half-tone and Wood Engravings. New York: William Wood & Co., 1900.

DA COSTA'S MODERN SURGERY.

The third edition of Da Costa's Modern Surgery comes to us in a revised and enlarged form. It presents in clear terms and concise form the fundamental principles, the chief operations, and the accepted methods of modern surgery, and presents a happy medium between the cumbersome text-book and the incomplete compend. The work is admirably fitted to meet the purposes of the student, being amply illustrated with woodcuts and colored plates. It will undoubtedly receive a considerable portion of the patronage of the student of surgery, and will be a valuable acquisition also for the practicing surgeon.

Modern Surgery, General and Operative. By John Chalmers Da Costa, M.D. With 493 Illustrations. Third Edition, Revised and Enlarged. Philadelphia and London: W. B. Saunders & Co., 1900.

STRINGTOWN ON THE PIKE.

American physicians have taken a unique position in the literature of their country, and to the names of those who have so distinguished themselves must now be added that of Prof. Uri Lloyd. His study of Kentucky life is interesting and full of force. Stringtown on the Pike is full of tender observation and expansive sentiment. In its story it happily combines the truthfulness and exactness which might be expected in a man of science with the broad and loftier range of vision of the idealist. The story is attractively written and well told.

Stringtown on the Pike. A Tale of Northernmost Kentucky. By John Uri Lloyd, Author of "Etidorhpa," etc. With Illustrations. New York: Dodd, Mead & Co, 1900.

HYGIENE OF INFANCY AND CHILDHOOD.

This little work deals exclusively with the fundamental subjects of anatomy, physiology, and hygiene of the developing period. It traverses the fundamental fields of pediatrics. As a condensed text-book of the subject, it seems to be unique.

Lessons on the Anatomy, Physiology, and Hygiene of Infancy and Childhood for Junior Students. Consisting of Extracts from Lectures given at Rush Medical College by Alfred C. Cotton, A.M., M.D. Chicago Medical Book Co.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Large Doses of Olive Oil in Stenosis of the Pylorus and Duodenum.

In the Section of Surgery at the recent International Congress of Medicine (*British Medical Journal*, Nov. 3, 1900), Dr. Paul Cohnheim presented a report on the therapeutic action of olive oil in cases of organic and spastic stenosis of the pylorus and duodenum, and in consequence of those conditions (gastrectasia). The paper was based on his own observations and experiments, made during the past year He drew from them the following conclusions: (1) Cases of gastrectasia dependent not on an organic obstacle, but on spasm of the pylorus, following an ulcer or fissure at the orifice of the stomach, are cured or markedly improved in a short space of time by the introduction of large doses of oil (100 to 250 grains daily). (2) In the same way cases of pyloric or duodenal stenosis of cicatricial character accompanied by secondary gastrectasia are cured in a relative sense by the systematic employment of large doses of oil—that is to say, the patients feel no discomfort provided they avoid all excess. In such cases the resistance caused by friction is diminished by the mechanical effect of the oil. (3) Cases of relative stenosis of the pylorus and duodenum, which are characterized by continuous secretion and pyloric spasm after the principal meals, are improved or completely cured by the oil. (4) It is well that the oil should be taken or administered through a tube during a more or less considerable period of time, thrice a day in doses of fifty cubic centimeters an hour before meals. If for other reasons this plan is impracticable a dose of oil (100 to 150 cubic centimeters) at the temperature of the body should be given once a day. The use of the oil meets three indications: it causes relaxation of the spasm, it diminishes the friction, and improves the nutrition, since the oil, even in cases of very pronounced stenosis, reaches the small intestine and is absorbed. (6) In cases of ulceration the oil acts on the spasm as a narcotic. If it be pure it has no unpleasant secondary effect; it causes neither eructations nor diarrhea; patients take it willingly. (7) Cohnheim has hitherto not succeeded in obtaining any favorable effect from the oil in cases of cramp of the stomach of purely nervous character. This fact supplies a means of

differential diagnosis between nervous and organic spasm. (8) By means of the oil cure it is possible to relieve a number of cases of pyloric stenosis with consecutive gastrectasia to such an extent that surgical intervention becomes superfluous. Cohnheim therefore thinks it is desirable to try this method of treatment in cases of stenosis of the pylorus before having recourse to operation.

Advisability of Early Operation in Cases of Acute Inflammation of the Appendix.

Mansell Moullin (*Medical Press*, Oct. 31, 1900) says that the danger is not in performing a simple exploratory operation, but in delaying to do so. The pulse-rate, says the writer, is the most valuable symptom of all. If at the end of thirty-six hours, while the patient is lying in bed, the pulse is over 100 in the minute, or if in the course of the last few hours it has increased much in frequency, there can be no doubt that the attack is a severe one, and that operation will be required. The temperature is no certain guide unless it continues to rise. The intensity of the pain is of great significance, and so are also, but perhaps in a less degree, local tenderness, muscular resistance, and a sense of fulness in the right iliac fossa. Vomiting, constipation, and the other symptoms usually present cannot be relied upon in the same measure.

Mr. Moullin lays great stress upon the fact that the absence of any individual symptom is of no account, and that operation should be performed in any case in which the pulse is rapid, even if other symptoms do not point to any great degree of severity. The limit of thirty-six hours, Mr. Moullin admits, is a perfectly arbitrary one. All cannot wait so long. Some might wait longer without undue risk. Each case must be judged upon its merits, and this must be regarded merely as an average. The point to bear in mind is that at the beginning of a severe attack we cannot, as yet, distinguish cases which might be allowed to wait from those which cannot. They will, all of them, have to be operated upon at last, some for adhesions, some for abscesses, some for concretions, or other causes, and it is wiser that a simple and practically safe operation should be performed at once upon all of them rather than that the disease should be allowed to run its course, and that those in which diffuse septic peritonitis occurs should be allowed to die in order to save the others from an operation they will have to undergo later. It is merely adopting the general principle that when there is a grave possible danger ahead, and there are no means of finding out the condition of things, or of controlling the issue, it is wiser to see how matters stand, if it can be

done without undue risk, than to trust to chance. But a preventive operation of this kind must be clearly distinguished from what are called early operations—those performed on the fourth or fifth day—which nearly always are too late and simply serve to bring surgery into discredit.

Surgical Hints.

The November issue of the *International Journal of Surgery* contains the following hints in surgery:

In cancer of the breast the presence of a large amount of fat renders less easy a thorough removal of the glands. Hence the prognosis of cure or prolonged survival must be more guarded in fat than in lean women.

When investigating the rectum with a long bougie it is always well to remember that there are two possible sources of error. In the first place the instrument may so double over that a mistaken idea of the length of the channel will arise. On the other hand, the bougie may be arrested by one of Houston's folds, this simulating a stricture.

It is only permissible to do an incomplete operation for cancer when it is knowingly performed with the object of relieving pain, soothing the imagination by giving the patient a faint hope, and getting rid of a loathsome sore, and because we know that recurrence in a scar is usually much less painful than the original ulcerative process.

In the diagnosis of malignant tumors it is well to recollect that the element of pain is quite an uncertain one. Sarcomata, for instance, are usually less painful than carcinomata, and yet we occasionally encounter cases of painless carcinomata of various regions. In some instances of adenoma the pain may be just as severe as in either of the other two.

In the presence of large aneurisms of important vessels it is well to remember that operation is most likely to succeed when the occurrence is recent, when there is no evidence of aortic or mitral disease, when there is an absence of the rasp sound along the aorta, which would indicate extensive atheroma, and when there is no important visceral disease.

Treatment of Prolapsus Ani in Children by Ice Tampons.

Hajeah (*British Medical Journal*) records very successful results obtained by the use of ice tampons even in the gravest cases of prolapse of the rectum in children. The method consists in the introduction into the rectum of cone-shaped fragments of ice (suppositories)

in the operation for reduction of the prolapse. The suppositories can be artificially frozen in molds, and should be three to three and a quarter inches in length, and the diameter of the base should be one to one and a quarter inches, according to circumstances. Such an ice suppository is enveloped in a piece of iodoform gauze, so that the latter covers it like the finger of a glove. The whole is then introduced into the center of the prolapse, and gradually and steadily pushed up till the prolapse is returned, the ice and gauze being carried up with the reduced bowel. Usually there is no pain experienced, and the tampon is retained. It should be the rule to introduce a fresh ice suppository with gauze after each defecation. The prolapse in this way becomes less and less in degree, and eventually ceases altogether. The beneficial result obtained is due partly to relief of venous congestion and of laxity of mucous tissue of the bowel, and partly to the increased contractility and tonicity of the muscular coat produced by the coldness of the ice and the mechanical contractile reflex proved. The ice-cold water acts for a longer time as a stimulant. This procedure has always been successful in Hajeah's hands and is strongly recommended by him.

Esophagospasm in Urinary Infection.

Grosglik (*Centr. f. d. Krankh. der Harn und Sex. Organe*, vol. ii) describes a new form of reflex neurosis—a spastic occlusion of the esophagus symptomatic of urinary infection. The patient, who suffered from prostatic hypertrophy, could swallow neither solid nor liquid food, and the esophageal sound itself, meeting an obstruction, awakened the suspicion of malignant disease. Treatment directed toward improving the urinary syndrome caused the disappearance of the esophageal coarctation, which consequently was classed in the spastic variety.

MEDICINE.

Medical Treatment of Cholelithiasis.

Professor Fleiner (*Munch. Med. Woch.*, Sept. 18, 1900), referring to the internal treatment of gall-stones, believes that a large field of usefulness remains for the physician after the acute symptoms of the attack proper have subsided, and lays particular stress upon the efficacy of gastric lavage and oil cure in the treatment of subsequent gastrointestinal disturbance and residual icterus.

No better nor more efficient treatment will meet the all-important

indication of intestinal activity than properly regulated oil enemata, which besides exert a powerful cholagogue influence.

Lavage of the empty stomach with lukewarm water, moreover, has a noticeable effect upon the flow of bile, as appears from the occurrence of clear bile flowing back into the stomach along with water regurgitated from the duodenum.

The large quantities of water which as the result of lavage are taken up into the portal circulation effect an efficient lavage, not only of the liver but even of the entire system.

Fleiner holds that methodic lavage is superior to mineral-water cures, even to the Carlsbad waters, and has, moreover, the advantage of being available at all times, not only during the season.

Another advantage of lavage is to be found in the massage which the repeated filling and emptying of the stomach effects upon pericholecystitic (perigastric) inflammatory adhesions.

The only drawback resides in the possible occurrence of capillary bleeding as the result of imperfect technique. Where the gastric mucous membrane evinces a marked tendency to hemorrhage it becomes necessary to forego lavage and resort to the mineral-water cure.

Two Cases of Necrotic Bronchopneumonia with Streptothrix.

In the October number of the *Journal of Experimental Medicine* C. Norris and J. H. Larkin report two cases of necrotic bronchopneumonia with streptothrix.

The two cases of bronchopneumonia in man forming the subject of this article were characterized by intense catarrhal and necrotic inflammation of the bronchi, and by the presence of numerous streptothrix colonies in the bronchial lumina.

Introduction of the bronchial material of the first case into the trachea of three rabbits induced pulmonary abscesses and empyema of the pleura and pericardium in one of the animals.

Introduction of the bronchial material of the second case into the ear vein of a rabbit, and into the trachea of a second rabbit, induced likewise pulmonary abscesses and empyema.

The empyemal pus of these rabbits contained filaments and rods morphologically identical with those composing the streptothrix colonies of the human cases.

From these two cases a streptococcus was cultivated on the ordinary media, the streptothrix not being isolated in culture directly from the human organs. By inoculating the fresh and sterile kidneys

removed from a normal rabbit with the empyemal pus of a rabbit injected into the ear veins with the bronchial material of the second case, the streptothrix from this case was finally isolated in pure culture, and its morphological and biological characters studied in detail.

Should Fever be Treated?

Dr. Stokvis, of Amsterdam, at the recent meeting of the Thirteenth International Medical Congress (*British Medical Journal*, Sept. 29, 1900), said there are certain cases, though they are rare, in which it is impossible not to intervene in a case of fever, as when alarming symptoms connected with the great functions of the economy (heart, respiratory apparatus, nervous system) place the patient in imminent danger of collapse. In such circumstances inactivity is out of place. But how is the practitioner to interfere? Dr. Stokvis thinks it is a serious error to try to reduce the temperature by the administration of antipyretics, and holds that recourse should be had solely to hydrotherapy and to the use of analeptics. The employment of medicinal agents, however, is sometimes legitimate in the absence of any threatening collapse. This applies to affections for which we have a specific medication, for in that case it is not only the pyrexia that we can combat but the fever itself. Unhappily this is very seldom the case, and, except in regard to malaria and acute articular rheumatism, the specific antipyretic is still to seek. In presence of a febrile malady it is equally exceptional to have to deal with symptoms of immediate gravity and to be in possession of a specific medication. Dr. Stokvis is therefore of opinion that the general rule, which applies to the immense majority of cases, is not to treat persons suffering from fever, but to nurse them. He thinks that it is not only by drugs but by hygiene and diet that one should deal with such cases.

Variations of Temperature During Purulent Appendicitis.

Schile (*Munch. Med. Woch.*, No. 18, 1900) has made a comparative study of the rectal and the axillary temperatures, more especially during purulent appendicitis.

The temperature in the axilla is proportionately lower than in the rectum, and the mean difference out of sixteen cases amounted to 0.6 of a degree. This occurred among people who were free from fever and recorded individual variations of from 0.1 to 1.5 degrees. Patients with fever show a difference of only 0 4 degrees in the mean.

The largest variation was recorded in a patient affected with purulent appendicitis, whose rectal temperature exceeded the axillary

mensuration by 0.9 of a degree. Schile ascribes this to pelvic hyperemia, especially of the rectum and the rectovesical cul-de-sac, in which pus had accumulated.

Acid resisting Bacilli in the Lower Animals.

D. M. Cowie (*Journal of Experimental Medicine*, October, 1900) briefly summarizes the results obtained from his studies as follows:

1. Acid-resisting bacilli are found in many of the lower animals, more especially the horse, cow, dog, guinea-pig, and white rat. In the case of the rabbit and cat no such organisms were detected.

2. Many of these acid-resisting bacilli resemble the tubercle bacillus and the smegma bacillus of man.

3. The acid resisting organisms are undoubtedly of different species, and there is good reason to believe that the term smegma bacillus denotes not a definite species but rather a group of bacilli having common staining properties.

Detection of Pus in the Urine.

Brandenburg (quoted in *Nouveaux Remèdes*, 1900, No. 18, p. 422) recommends tincture of guaiac. He states that we already know that if blood be present in the urine the addition of this reagent will in the presence of hydrogen peroxide give rise to a characteristic blue discoloration.

THERAPEUTICS.

Suprarenal Gland Extract as a Hemostatic.

Of the therapeutic uses of suprarenal gland, O. F. F. Greenbaum (*British Medical Journal*, Nov. 3, 1900) has the following to say:

The advantage of suprarenal extract over the more popular hemostatics lies in the fact that it acts in very dilute solution, and does not tend to combine with albumin and become inert, in a similar way to ferric chloride; it must, however, be borne in mind that it does not cause coagulation of the blood, and therefore does not seal the bleeding points with clot.

In hematemesis the most rational method of using iron is by administering one large dose, since some of it will combine with the blood already shed into the stomach, and an excess is required to cause coagulation of the blood oozing from the vessels and thus seal them. The correct administration of suprarenal extract in the same pathological condition offers considerable contrast; small doses

may be given, since the drug acts in very dilute solution, but it must be repeated at short intervals, for only while the vessel wall is under the action of the extract will it remain contracted. Coagulation of blood is not accelerated.

Practice substantiates theory, for in cases where suprarenal extract has been administered temporary cessation of bleeding has occurred, but often recurrence of hemorrhage has ensued after several hours when no repetition of the dose has been ordered.

Hemorrhage from a small artery is more likely to be efficiently controlled than capillary oozing from a hyperemic mucous membrane. It is no easy matter to foretell whether its exhibition in typhoid ulceration and hemorrhage would be followed by satisfactory results, since it is questionable whether the extract would reach the site of the ulcer in a potent form. The author has not had opportunity of making practical observations.

Two or three tablets crushed and mixed with a few ounces of water and injected into the rectum is the most satisfactory method of applying the remedy in hemorrhage from that viscus. A sterile extract is not irritating, and may be used to wash out the bladder when bleeding occurs from that organ; it may also with advantage be added to the water used as a uterine douche in cases of post-partum hemorrhage.

If we accept the theory that congenital hypoplasia of the vessel walls is associated with hemophilia, we should not expect that in that pathological condition suprarenal extract would be followed by satisfactory results. In no single instance in which this condition has been treated with this drug has Greenbaum been able to satisfy himself that benefit has accrued.

Summary of the Treatment of Typhoid Fever Cases in Johns Hopkins Hospital for Ten Years.

The treatment of typhoid fever in the Johns Hopkins Hospital, according to Wm. Osler (*Philadelphia Medical Journal*, Oct. 13, 1900), consists in:

1. A careful and thorough system of nursing, to which, as much as to any other single feature, he attributes the comparatively low rate of mortality for a general hospital. The proportion of nurses to patients is above the average.

2. Diet. Milk, diluted with lime-water, and egg albumen form the standard diet of the febrile stage. Rarely are artificial foods ordered. The milk has not often to be peptonized, and on the whole there have been singularly few gastric complications, and comparatively few

instances of serious bowel trouble. The patients are given in addition an abundance of cold water.

3. Hydrotherapy, either the full tub at 70°, or, if occasion requires, ice-cold sponges.

4. Drugs. As a rule no medicines are given. If the pulse becomes rapid and feeble alcohol in the form of good whiskey is given, and strychnine, if necessary, in full doses. No antipyretics and no intestinal disinfectants are used. Special complications of course require and receive appropriate treatment.

The Influence of Light on Morbid Processes.

Boeder (*Arbeit. a. d. Kaiserl. Gesundh.*, vol. xvii, pt. 1) has carried out certain experiments on the therapeutic value of electric light, with results mainly negative, and in some respects unfavorable. The results of other authors have differed widely. He experimented on guinea-pigs, rabbits, mice, and rats infected with anthrax, cholera, tubercle, and other bacterial poisons. By attenuating cultures he was able to study the effect of the light on subacute and chronic as well as on acute processes. He summarizes his results as follows: The electric rays, both incandescent and arc, have a direct bactericidal power. This, however, has no appreciable effect on general infective processes, acute, subacute, or chronic. Localized disease processes, where bacteria are present either in or under the skin, are favorably affected by the arc light—that is to say, some bactericidal action is to be observed. Exposure to the light stimulates cell activity and increases the vascularity of a part, and in this way acts favorably on the morbid processes. It is only in chronic infective processes that the light-baths are likely to be used with advantage, and perhaps exclusively in those where the process is cutaneous or subcutaneous.

Naftalan in Hemorrhoids.

Rauch (*Deutsche Med. Woch.*, Sept. 27, 1900, p. 37) has used naftalan ointment and naftalan suppositories in a case of eczema of the arms with rectal ulcerations, and reports remarkable results. Concomitant hemorrhoids were reduced to about one-half of their former dimensions. Profiting by this experience Rauch made use of twenty-per-cent naftalan suppositories in a series of ten cases of painful hemorrhoids. One patient who suffered from profuse hemorrhage after each stool, but in whom the indicated operation had to be adjourned on account of a severe pneumonia, experienced within the week such remarkable improvement that operative interference dropped out of the question. Naftalan is possessed of notable vaso-

constrictive and anodyne properties which, aside from hemorrhoidal inflammation, render it especially valuable in the treatment of rectal ulcerations and fissures.

Rauch recommends an excipient composed of cocoa butter 1.5 grammes and white wax 0.5 gramme, and reports that in every case defecation became easier, but whether on account of the suppository treatment or of the naftalan remains an open question.

Methylene Blue as an Analgesic.

Klemperer (*British Medical Journal*, Nov. 10, 1900) treated twenty-seven cases of sciatica. In eight it failed; in six pain disappeared in five days; in thirteen the sciatica continued for several weeks, but pains were less frequent and patients could sleep. Three to six capsules containing 0.45 gramme (about 7 grains) were given daily. Slight gastric disturbances occurred; pain during micturition was easily annulled by adding a little nutmeg to each dose. The medicament is very useful in tabes, neuralgia, and myalgia in diminishing the pains. It is best to commence with 0.25 gramme (4 grains) twice a day, and very gradually increase to one gramme (15½ grains) or more. The substance must be absolutely pure, otherwise gastric, toxic, and diarrheic troubles will follow. It should be administered in well-made cachets, to avoid coloration of the oral cavity. The patient should be warned of change of color of urine, and that slight vesical spasm and dysuria may occur. The remedy causes at first a numbness, passing gradually into analgesia; its action is rapid, but of not long duration. Hence it is necessary to continue the medication whilst any pain is felt. It is claimed that in excessive doses it does not cause the depression, etc., of increased amounts of the ordinary analgesics, and is worthy of extended use.

The Quantity of Diphtheria Antitoxin Required in the Treatment of Diphtheria.

Wm. H. Park (*Archives of Pediatrics*, November, 1900) says that he has been led to adopt the following dosage: In very mild cases, 1000 to 1500 units for the first dose; moderately severe cases, 2000 to 3000 units for the first dose; very severe cases, 4000 to 5000 units for the first dose; laryngeal cases, according to their severity, 2000 to 5000 units. The writer says that for children under one year of age about one-third less should be given than for older children and adults. He also says that the condition of the throat as to swelling, extent and nature of the membrane, etc., is a better guide to antitoxin dosage than the general condition of the patient. If at the end of twelve hours after the injection the inflammation is advancing, or if

at the end of eighteen hours the inflammation has not clearly begun to subside, as shown by lessened congestion and swelling, he believes a second dose of antitoxin should be injected. In a very few cases a third dose is required at the end of twenty-four to thirty-six hours. For the bronchopneumonia and sepsis complicating the worst cases, antitoxin is generally of no avail.

The Treatment of Syphilis in New and Tolerable Form of Administering Mercury.

Winfield Ayers (*Philadelphia Medical Journal*, Nov. 10, 1900) reports a series of sixty-five cases of syphilis treated with mercurol. He found that the average amount of the drug required to control the disease was three grains daily. In starting a patient on a course of mercurol he says it is advisable to begin with half-grain or grain doses. The writer thinks that mercurol is superior even to mercuric chloride in controlling the symptoms of syphilis. Like all preparations given internally, mercurol has very little effect on the chancre; still it has hastened the healing slightly. It seems to be much more efficient in controlling skin eruptions than mucous eruptions.

The writer, from his experience, concludes that mercurol causes less disturbance of the gastrointestinal tract than any other preparation of mercury used internally; that it controls skin eruptions and pains much better than any other preparation, while it controls mucous eruptions as well as any other, and has an equally good effect on the chancre; also that it is an advantage that it can be taken in pill form.

A Combination of Iodoform and Calomel in the Treatment of Suppurating Scrofulous Glands.

P. Sprengel (*Medical Press*, Oct. 31, 1900) recommends a mixture of equal parts of iodoform and calomel in the treatment of wounds. He employed it in suppurating scrofulous glands. In one case which promised but poorly, in which repeated scraping and nitrate of silver and pure iodoform had achieved next to nothing in two months, the rubbing in of the calomel and iodoform mixture effected a complete healing in two weeks. In other cases not so trying as the one just mentioned, healing took place in less time than would have been required by other methods. On the other hand, in soft ulcers and panaritium, the compound was not more effective than other remedies. One of the advantages of the combination was that it could be used in the case of persons who had an idiosyncrasy in regard to iodoform alone. In no case did it appear to do any harm. The epidermis

became loosened in some way, but even in these cases it got right again as soon as the fatty covering material was made use of.

Hypodermic Injections of Iodide of Sodium in Rheumatism.

Otto (*Ther. Monatsh.*, No. 14, 1900) confines his treatment of acute or chronic muscular rheumatism to the hypodermic injection of sodium iodide in five-per-cent solution, of which he uses two syringefuls. The solution should be as recent as possible, since on standing it decomposes and liberates iodine, which renders the injection more painful. No untoward effects have been noted from the treatment, nor any abnormal sensitiveness special to different regions of the body, so that the injections were almost always made into the painful region itself. Within the next twenty to thirty minutes a more or less intense burning is felt, proportionate with the age of the solution, and the pain begins to recede, while movement becomes more practicable. Beneficial results were prompt and remarkable, one injection of from five to ten centigrammes being generally sufficient. Otto has never met with a failure, and has come to discard all other therapeutic measures in the treatment of muscular rheumatism.

Raw Meat and Alcohol in Tuberculosis.

Furster, at the Thirteenth International Medical Congress, Paris (*Wiener Klin. Woch.*, Sept. 20, 1900), indicated the following technique for the employment of this latest plan of treatment, which has been favorably reported upon even by the lay press: Raw beef or mutton is scraped with a large blade, and divided into small masses the size of a hazelnut or strawberry, of which the patient takes from 100 to 300 grammes a day in apricot jelly, powdered sugar, etc., without prejudice to his usual diet. Alcoholic stimulants exhibited in hourly doses of one tablespoonful constitute a necessary adjuvant of the method. Favorable results obtained by this plan of treatment, as confirmed by Richet and Chantemesse's experiments upon animals, are not—as Bouchard would have it—traceable to mere overfeeding. The elder Furster claims excellent practical results from thirty-five years' experience with this method.

Alcohol Dressings.

Fraeser (*Munch. Med. Woch.*, 1900, No. 29) reports upon the use of alcohol dressings in inflammatory troubles, phlegmons, buboes, felons, mastitis, etc., and records encouraging results. The evolution of felons, for instance—provided they are taken in time—can be pre-

vented in every instance, and even when undertaken too late the cases prove to be considerably shortened by the treatment. Alcohol dressings are of especial value in buboes, where they prevent suppuration. If left off too soon the glands will swell again, and become more sensitive to pressure.

Treatment of Hay-fever.

Mounier (Thirteenth International Medical Congress, Paris; *Berl. Klin. Woch.*, Sept. 17, 1900, p. 855) concludes from a study of eleven cases that periodic and aperiodic coryza (viz., hay-fever) often is the result of an autointoxication, and that its cause is to be found in an elimination of toxic products by the respiratory mucous membranes. The treatment of such cases should rely upon dietetic measures; of therapeutic agents strychnine and benzonaphthol are to be recommended, nor should indications for local surgical treatment be neglected.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Fetid Breath.

Professor B. Fränkel (*Archiv für Laryngologie*, vol. x, p. 177) offers some early remarks upon the subject of disagreeable odors arising from the mouth and other parts of the respiratory tract. In order to determine definitely whether the odor arises from the nose or the mouth, a piece of cardboard of suitable dimensions is held against the upper lip beneath the nose, and the patient, with the mouth closed, blows first through one nostril and then the other. The observer sits with his nose at the opposite edge of the cardboard, and may in this way determine whether one or both nostrils afford the source of the odor. Then with the nostrils closed the patient is allowed to breathe through the mouth. If one has determined that the odor arises from the mouth, it is necessary to further decide whether any particular portion of the mouth or pharynx is responsible for the odor. To accomplish this Fränkel collects the secretion on a cotton applicator from each suspected spot, and submits it to his own olfactory judgment.

Not rarely carious teeth are responsible for the fetor. In such cases the dentist can usually remove the odor. In other and not rare instances the various tonsils with retention of secretions in their follicles or small caseous abscesses in the tonsillar tissue form the

source of the odor. For the relief of these cases the author suggests splitting the tonsils, dilating the openings of the follicles, the local application of Lugol's solution, or amputation of the tonsils, as the case may require, in order to remove the source of the odor. He lays special stress upon the plica tonsillaris and the recessus tonsillaris as localities in which frequently the decomposition of secretion has taken place. By splitting up the folds with the scissors under cocaine anesthesia, success is attained in the treatment of such cases. If it is possible in this way to locate the source of the odor, the treatment is easily carried out and generally successful, but in other cases where the secretion of the entire mucous membrane has undergone fetid decomposition, or where the disagreeable odor arises from the lower respiratory tract or from the esophagus, the prospect of treatment is not so good. One must always recommend in such cases that the mouth and throat be thoroughly and frequently washed out with some bactericidal and deodorizing medium.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

White Spots and Streaks in the Nail.

In a paper entitled "Leucopathia Unguium," read before the Section of Cutaneous Medicine and Surgery, American Medical Association, at Atlantic City, June 5, 1900 (reported in the *Journal of Cutaneous and Genito Urinary Diseases*, November, 1900), Dr. M. L. Heidingsfeld says in part:

"The presence of white spots or streaks in the nail has been observed by both laity and profession from time immemorial. Soothsayers have attributed considerable importance to their presence, and they have been variously designated as 'gift' or 'fortune' spots, 'lies' or mendacia, 'flowers' or flores unguium, leucopathia unguium or leuconychia. They are characterized by chalky-white deposits, situated in the nail substance, making their appearance near the lunulæ, and gradually passing forward to the free edge, with the growth of the nail.

"No doubt agencies other than trauma may cause leuconychia; it has been well established that the condition may be induced by anemia, multiple neuritis, typhoid, measles, and other febrile diseases, associated with general malnutrition. The striate and punctate forms indicate that the cause is intermittent in character, each point or stria corresponding to a lesion of definite duration. Leuconychia

totalis, on the other hand, denotes a constant cause, or, if intermittent, the intervals are of such short duration that little time is afforded for the formation of normal nail substance.

"There are numerous well-authenticated instances where nervous influence affects the growth and appearance of the nails. Longitudinal ridges frequently show themselves after periods requiring severe and prolonged mental activity. It is therefore not unlikely that leuconychia results occasionally from purely nervous causes.

"Febrile diseases, associated with malnutrition, typhoid, measles, scarlatina, typhus, etc., frequently affect the nails and induce a change closely resembling leuconychia. In most instances there are points of material difference. The surface of the nail, instead of being smooth and even, is crossed by a deep transverse furrow, grayish in color, which is separated from the anterior normal portion by a ridge. The anterior border is deep and sharply defined, and marks the onset of the febrile disturbance. The posterior border is shallow and fades gradually into the posterior portion of the normal nail substance, and marks the period of convalescence. The distance of the furrow from the lunula measures the time that has elapsed since convalescence has been established, and is a point of medicolegal value. The analogue of this condition occurs on the hoofs of animals after severe illness, and the horns of cows show a similar change after each parturition.

"Authorities are almost universal in the opinion that the pathological change in leuconychia is due to an infiltration of air. Some writers express a great deal of doubt concerning these observations, but all, as far as we have been able to determine, fail to offer a rational explanation on a different hypothesis."

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

Birth of Living Child Nineteen Minutes After Death of the Mother.

Dr. Kirch Crefeld publishes an account of the case in the *Centralblatt f. Gynäkologie* of October 25, 1900. The patient was a woman of forty, who had suffered a good deal from rheumatism, and who had mitral insufficiency. At the end of the previous pregnancy there was a considerable amount of edema with concentrated diminished urine,

difficulty of breathing on the slightest movement, and irregularity of pulse. About three weeks before the end of the normal period, after working late into the night, strong pain set in, the waters escaped, and before the patient could be put into bed the child was born. After this there was a short rest, during which the patient complained of shortness of breath, after which she fell lifeless, thick white mucus escaping from the mouth. The writer, who appeared shortly afterwards, was able to verify that the woman was really dead. The foot of a second child was observed protruding from the vulva, and the fetus was quickly extracted. The child showed slight signs of life, and after a time it was completely restored, but only to live for a few hours. The writer estimates from the accounts given that between the time of the mother's death and extraction of the living fetus nineteen minutes had elapsed.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Chorea and Chorea Gravidarum.

Gilles de la Tourette (*Rev. Neurol.*, June 30, 1900) opposes the view that chorea is associated with rheumatism. He states that of seventeen consecutive cases of chorea at his clinic, only one had rheumatism before or during the attack, and that of several who returned after recovery none had shown any sign of the latter disease. He concludes that chorea has nothing to do with rheumatism, and that its diagnosis is entirely uninfluenced by the presence or absence of rheumatic manifestations. He maintains further that true Sydenham's chorea never comes on after puberty; he bases this statement on the fact that the two oldest of his patients, girls of sixteen and eighteen respectively, had never menstruated. From this he deduces the further view that chorea gravidarum is not the same as Sydenham's chorea, and holds that many cases so described are really examples of hysterical tremor, while others belong to the category of the convulsive tics, the pregnancy acting as the exciting cause. He admits that a few may be classed under the rare heading of chronic or Huntington's chorea. The author attaches great importance to the fact that in one of his cases the movements persisted after delivery. He believes that with the improvement of diagnosis along the lines he has indicated there will be no further need for the induction of premature labor in this affection.

THE MEDICAL AGE

VOL. XVIII. DETROIT, DECEMBER 10, 1900. NO. 23.

ORIGINAL CONTRIBUTIONS.

LOCOMOTOR ATAXIA: A REVIEW OF SOME OF THE RECENT LITERATURE.*

BY H. R. NILES, M.D.,

Oak Grove Hospital, Flint, Mich.

In the following review of locomotor ataxia I have dealt briefly with those features of the disease with which we are all familiar, devoting most of my time to elucidating less well known points and bringing to your attention some of the results of recent research which have perhaps passed some unobserved. Owing to my endeavor to keep the paper within a reasonable time limit I have no doubt omitted many important facts, for in attempting to review the literature on locomotor ataxia I was early overwhelmed with confusion. Investigators in this field have been numerous, and each has interpreted many of the manifestations of the disease according to his own theories and his more or less limited experience. Conclusions reached vary widely.

The adoption of the neuron as the unit of the nervous system has changed former conceptions of locomotor ataxia very materially. But a short time ago "posterior spinal sclerosis" was supposed to be an accurate description of the pathological process. It was believed that the primary change occurred in the interstitial elements of the posterior columns, and by a hardening process or sclerosis so encroached upon the parenchyma or nerve cell as to destroy its function. The reverse of this process is practically established. The sensory neuron degenerates, as a result of some subtle influence which will be considered later; the parenchyma of the posterior columns dies, the function is lost, and the sclerosis is entirely a secondary process and is to be looked upon as the result of an effort on the part of nature to refill

* Read before the Northeastern District Medical Association, Sept. 13, 1900.

the vacancy left by the degenerated neurons. The sensory neuron with which we are more especially concerned consists of a nerve cell situated in the posterior spinal ganglion and two primary processes extending in opposite directions, one terminating higher up in the cord, the other sending filaments to the skin and muscle. One of the chief functions of the nerve cell situated centrally is to maintain the nutrition of the entire neuron. The muscle terminal is the so-called muscle spindle — a sensory organ now known to figure prominently in the muscle-sense, which includes appreciation of position, weight, etc.

It will be recalled that disturbances of the muscle-sense constitute some of the more important symptoms of tabes. In the pathology of locomotor ataxia there is a constant degeneration of the lower sensory neuron, usually beginning at one or both ends, but sometimes involving the entire sensory tract. When the disease first affects the upper portion of the sensory tract we get optic atrophy and paralysis of the ocular muscles, while when the peripheral end is first affected we find paresthesias and muscular incoordination. In some cases we see the entire symptom complex develop almost simultaneously, indicating an involvement and degeneration of the entire neuron. Malnutrition from one or more of several sources is the cause of the degeneration. In the recent studies of the physiology of all neurons, three factors — toxemia, exhaustion, and traumatism — have been found to be largely responsible for interference with nutrition and resulting degeneration. To this, of course, must be added heredity or predisposing causes. Owing to the peculiar arrangement of the capillaries and of the lymphatics in the vicinity of the posterior spinal ganglia, the blood is held longer in contact with the nerve elements of these ganglia. This has been advanced as an explanation of the selective action of these tissues in so many poisoned blood states. There is an accumulation of poison at these points, consequently the neuron whose nutritive center is situated there is first to suffer ill effects. The natural point for the beginning waste of this highly specialized nerve unit is at its two extremities so far removed from the center of nutrition. This, too, affords a plausible explanation for the simultaneous appearance of widely separated symptoms, such as the ataxic gait, the lost knee-jerk, and the anesthesia on the one hand, and the optic atrophy and ocular palsies on the other.

The pathology of tabes is as yet but an incomplete chapter in the history of the disease. Enough has been proven, however, to demonstrate that it is not a primary sclerosis of the posterior columns. According to the newer teaching it is a parenchymatous degeneration with secondary sclerosis. The area of the cord most affected is the

lumbar enlargement and lower dorsal region; and the tracts which exhibit the greatest damage are the columns of Goll and Burdach, while as the disease advances changes are noticed higher up in Clark's vesicular tract; and Gower's sensory tract is not infrequently involved. Less constantly the direct cerebellar tract shows similar degenerative changes. Structures outside of the cord that have been found diseased are the sensory end organs, the posterior spinal nerve roots, and many of the cranial nerves like the optic, oculomotor, abducens, auditory, and parts of the cerebral cortex. I have already mentioned the toxic origin of the disease, and the peculiar arrangement of the blood-supply and lymphatics as a cause for its selective action. Other investigators suggest that a thickening of the pia mater, so often one of the later developments of syphilitic infection, by compression of the posterior root fibers at the point of lesser resistance leads to their degeneration. Further discussion of this subject, although interesting, would prove unprofitable, as none of the theories has been satisfactorily proven.

In turning to the etiology we find that men suffer from the disease much more frequently than women, the proportion being something like ten to one. It is practically a disease of middle age, fully half of the cases developing between thirty and forty. In very rare instances it has been met with as early as ten and as late as sixty. A wide disparity of view exists as to the influence of syphilis in the causation of the disease, equally competent observers placing the percentage from twenty to ninety. That other toxemic states, as well as exposure to wet and cold, traumatism, and occupations or habits which from their nature place unusual demands upon the posterior spinal nerve ganglia, play an important part—indeed may cause the disease, without syphilitic infection—is quite generally believed. In this connection the experiments reported at the recent German Medical Congress are of interest. Edinger read a paper on "Degeneration of the Posterior Columns" which had been experimentally produced in rats previously made anemic and then compelled to overwork in a treadmill. The rats were killed, and upon examination of the cords degenerations of the posterior columns were found. Edinger thinks that from this experiment the etiology of tabes is made clear, believing it to be a degeneration of the sensory nerve fibers from overexertion when the ordinary powers of resistance have been lowered, whether by anemia, toxic conditions, or syphilis. He considers this important in connection with prophylaxis, believing that syphilitics, those anemic, or run down, should be advised against the great danger of excessive exertion and exposure. Tabes may appear within a year following luetic infection, but in the vast majority of cases manifests itself from five to

twenty years after the infection. From this we may conclude that the lesion is not in the ordinary acceptance of the term a syphilitic lesion, but by the impairment of the vessel walls, thickening of the meninges, and blood impoverishment, rather predisposes the system to the evil effects of the other etiological factors mentioned above; or on the other hand, one of neuropathic heredity, with a nervous system which under the most favorable circumstances offers but little resistance to irritating influences, may rapidly develop locomotor ataxia from syphilitic infection alone.

Dr. Collins says: "No one to-day believes that tabes is pathologically a syphilitic disease. Still, nearly every one believes that if syphilis were swept from the face of the earth, locomotor ataxia would not occur. Between the period of the existence of the syphilitic virus *per se* and the development of the morbid processes constituting the anatomical basis of tabes dorsalis there develops a poison, or something due to the former and provocative of the latter. What this intermediary peccant substance is we can only conjecture."

Thorough treatment of the syphilitic infection at the time of its occurrence militates against, and is thought to prevent, the development of locomotor ataxia, but the experience of many has been that the disease is as apt to develop in patients who have been vigorously treated for a long time as in those who have had no systematic antisyphilitic medication. Railroad employees, soldiers, sailors, policemen, lumbermen, drivers, and others whose work combines exposure to wet and cold with severe physical employment, are frequently subjects of tabes. Excesses in athletic sports, and anything which exhausts the sensory neurons and maintains the exhaustion, are considered predisposing causes, and where a person has been rendered liable to tabes by syphilis, as exciting causes. Cases in women have been reported where the only discoverable cause was working excessively with sewing machines.

For a victim of locomotor ataxia to first consult a physician on account of incoordination is unusual. As a rule other symptoms cause the patient to seek the advice of a physician. Among the earliest are the lancinating and other pains. Frequently these will be the only symptoms complained of for months, and unless careful tests of the reflexes, coordination, and the pupilary conditions are made failure to make a correct diagnosis will occur, and the patient will be deprived of the advantages of early treatment. Not infrequently the pains do not conform to the classical type of the severe, sharp, or stabbing intermittent pains in the legs. They may occur in some other locality and have the character of rheumatism or neuralgia. Some complain merely of an excessively tired feeling, of an uneasy

ache in the legs, or epigastric distress. A considerable number of tabetics consult the oculist for some defect of vision, which may be due to atrophy of the optic nerve, ptosis, or ocular muscle palsies. In some the bladder is the first organ to be disordered, and a symptom which misleads many is the gastric crisis. It usually appears early, and the patient is sure to have some digestive disturbance to account for the attack. By presenting the symptomatology in this manner I wish to impress the fact that the disease begins very insidiously; its early progress is usually slow, and a correct diagnosis will not be reached unless a painstaking examination is made. By applying careful tests we will find accompanying the above mentioned symptoms, impaired or complete loss of the knee-jerk and the Argyll-Robertson pupil—two symptoms which if found in company with any one of the above mentioned make the diagnosis of locomotor ataxia reasonably certain. The Argyll-Robertson pupil is one showing a loss of reflex to light while accommodation to distance is preserved. The pupils are often found abnormally contracted early in the disease, sometimes to a degree which has given origin to the term "pin-point" pupil. The pupils may also be unequal. Ordinarily the ataxia is first noticed by the patient in walking at night or in attempting to follow a narrow path. Walking, hitherto an automatic action, owing to the offices of the muscle spindle or muscle terminal of the sensory neuron, has now, owing to its degeneration, become an act requiring a certain degree of attention and the aid of vision. In other words, the muscle-sense or sense of position—sense of motion—is lost, and the patient is unable to appreciate the movements of the lower extremities without depending upon the sense of sight.

Quite early in the development of the ataxic stage the patient will present the Romberg symptom, an inability to stand without swaying or falling if the feet are placed close together with the eyes closed. Minor degrees of this symptom can be demonstrated by asking the patient to stand on one foot or to rise on tip-toe. I was interested to learn that the Romberg symptom had been demonstrated by Dr. Sachs and others in those patients where optic atrophy had progressed to complete blindness. While they could stand steadily with the eyes open, they were unable to do so with eyes closed. Some degree of ataxia of the ocular muscles is found, and more rarely ocular paralysis involving the third, fourth, or sixth cranial nerves. In the early stages there is often diminution of the knee reflexes, which may be unequal on the two sides. In one case seen recently marked delay of the knee and ocular reflexes was a prominent symptom. Absence of the knee-jerk may exist in healthy persons, although such instances are not common, while abolition of the knee-jerk is exceedingly con-

stant as a symptom of locomotor ataxia. Occasional cases have been noted where the degeneration was confined to the upper neurons, affecting chiefly the eye, in which the knee reflex remained intact. Optic atrophy is a symptom which is found in from ten to thirty-five per cent of all cases. The progress of the atrophy is usually slow, and remissions may occur. Blindness ensues in from three to five years. One of the first symptoms may be an attack of double vision with or without ptosis. Occurring in the early stages of the disease such attacks are usually abrupt, some disappearing completely within a few days or a week. One author believes that sudden, painless, ocular palsies in an adult are almost pathognomonic of tabes.

Developing at some stage of the disease in the majority of cases are the tabetic crises, which may involve the stomach, intestinal tract, the kidneys, bladder, heart, or other organs or localities. Gastric crises are most common. The patient is suddenly seized with excruciating pain, which is usually accompanied by retching and vomiting. The attack may continue for several days or may end after a single paroxysm. Cardiac crises resemble attacks of angina pectoris. Crises are usually among the earlier clinical phenomena and may persist for years, though often disappearing with the lancinating pains as the disease advances. Peculiar to the tabetic crises and a distinguishing feature from other affections is the sudden resumption of the normal function. Other and less frequent symptoms are the arthropathies, commonly known as Charcot's joints, which may affect any of the joints of the extremities; ulcerations of the tissues, usually of the feet, which show a tendency to perforate and are exceedingly rebellious to treatment; spontaneous fracture of the long bones; and localized atrophies.

Locomotor ataxia is a slowly progressive disease, each succeeding year usually finding the patient a little more incapacitated. The duration of the disease is from ten years to half a lifetime. Certain cases have terminated fatally within a few years. Unfortunately recoveries do not occur often, but despite this it should not be forgotten that cases do recover. When the disease is recognized in its incipiency and prompt and persistent treatment applied, the prospects for recovery are as good as or better than in other organic diseases of the nervous system; at least, we can expect many years of comparative comfort and a certain degree of usefulness. In a recent article Dr. Brower, of Chicago, says: "I am of the opinion that with many a too gloomy prognosis is made. In my experience the arrest of the disease is not infrequent when the treatment is commenced in the preataxic stage, and considerable improvement is possible even when the second and third stages of the disease have been reached prior to its commencement."

Dr. Collins in his recent work takes up the treatment under five heads:

"1. Prophylactic treatment.

"2. The treatment of the morbid process forming its anatomical basis.

"3. The treatment of the distressing symptoms which the disease causes.

"4. The treatment which has for its aim the reeducation of the extremities.

"5. The general systemic treatment."

Under the first head he takes up the advisability of antisyphilitic treatment and the treatment of other factors attributed to syphilis. Neurologists differ as to the advisability of giving antisyphilitic treatment. Some hold that treatment is useless no matter how clear the history of previous infection, providing of course that the symptoms of tabes did not develop shortly after the infection when the lesions might be considered truly syphilitic. On the other hand, many who have had large experience teach that every case of tabes giving a specific history should be given a vigorous course of antisyphilitic medication combined with general restorative treatment. Dr. Collins says: "It is my own belief that absolutely nothing is to be expected from the administration of mercury, be it by the mouth, inunctions, or hypodermically, in cases of genuine tabes in which no other syphilitic manifestations are present. Moreover, I believe that such treatment often does harm."

In every case of tabes in which there are true syphilitic manifestations, or in cases developing within four or five years after infection, it is of the utmost importance to adopt at once the most vigorous antisyphilitic treatment. By "vigorous" I mean mercury by inunction or hypodermically pushed to the verge of salivation, and the administration of the iodides in heroic doses. Beginning with forty grains three times a day, the dose should be rapidly increased to three or four times that amount. The treatment will be well borne if elimination is facilitated by Turkish or Russian baths and care taken to put the least possible work upon the digestive organs consistent with good nutrition. A frequent mistake is made by putting the tabetic patient upon this treatment and permitting him to run down in weight. Nutrition cannot be too carefully looked after, and the patient should spend much time in the open air. Under the head of treatment directed against the morbid process Collins states the preference of eminent clinicians for the various remedies, and goes on to say that the only substances which experience has shown to have any effect in delaying the disintegration of the sensory neuron are iodide

of potassium in small doses and nitrate of silver. The latter may be given in half-grain doses two hours after meals, and kept up for a period of six or eight weeks. The patient is then put upon iodide of potassium in ten-grain doses given for the same period. If there is no decided benefit from one course of such treatment it should not be repeated. He says: "I have never seen the slightest benefit result from the administration of ergot. It should never be given. Strychnine and the glycerophosphates are extensively and deservedly used, but not with any view to influencing the anatomical lesion save by improving general nutrition." In regard to the serum therapy so much vaunted by Brown-Sequard, he thinks it has not been attended by sufficient success to warrant one in recommending any of these preparations in the treatment of tabes.

In the symptomatic treatment the physician will have abundant opportunity to display his resources. Patients rightly demand relief from the lancinating pains, and this symptom will sometimes be found so obstinate as to require the use of opium, but this drug and its alkaloids should be used with the greatest caution, else you add another serious malady to the patient's already heavy burden. Frequently the pains can be alleviated by the use of phenacetine, acetanilid, by counter-irritation over the spine, such as by actual cautery, electricity, warm baths, hot sitz baths, hot and cold packs, ice applications, and spinal stretching. Occasionally the pain can be relieved by the prolonged warm bath followed by general faradization and massage of the extremities. The treatment of the crises often demands the temporary use of morphine. Here there is little danger of the formation of the habit, for as soon as the crisis is over there is no further indication for its use. In the gastric crises oxalate of cerium is sometimes of service. During the attack there is marked disturbance of the digestive functions, and this will require suitable remedies. Oftentimes rectal alimentation is necessary. Ice applied over the stomach, spraying the epigastrium with chloride of ethyl, and prolonged faradization of the abdominal wall, have all been found of service. In some instances laryngeal crises require the inhalation of chloroform. The symptoms demanding relief during the crises are so numerous that I will not attempt to outline the treatment for all. The usual remedies are applicable, and above all absolute quiet and rest are indispensable.

With the revolutionary changes in our conception of the pathology of the disease have come corresponding changes in our ideas of treatment. Instead of attempting to promote the absorption of the products of sclerosis, we bend our energies to improving the nutrition of the sensory neuron, thereby preventing sclerosis. By means of rest, nourishment, tonic treatment, electricity, and baths, we foster the

vitality of the nervous elements of the posterior columns of the cord, and attempt to build up rather than break down. Three remedial measures stand out conspicuously — rest, nutrition, and reeducation. Rest should be employed in varying degrees. In rapidly progressing cases from six to ten weeks of absolute rest in bed with daily massage and faradic exercise of the muscles is the only measure that will delay the progress of the disease. In other cases from two to four hours' rest in bed during the day is all that will be required. Dr. Brower recommends for his tabetic business and professional men the use of a couch in their offices, from which they can transact considerable business while in the recumbent posture, thereby giving rest to the spinal cord. Excessive mental work and physical fatigue should be strenuously avoided. Sexual excesses are especially harmful. In whatever exercise is taken the patient should always stop short of fatigue.

The importance of maintaining nutrition by a carefully selected diet cannot be overestimated. In conjunction with this should be used tonics, electricity, hydrotherapy, massage, and other measures that will suggest themselves. Iron, quinine, nux vomica, the nitrate of silver, arsenic, the chloride of gold and sodium, and phosphate of zinc are a few of the many remedies recommended that have borne the test of time and have established reputations as tonics and alteratives. Strychnine is absolutely interdicted by some, while others use it in tonic doses, and one author has given the nitrate in doses as great as three-fifths of a grain daily, claiming excellent results. Dr. Brower says: "I am very confident that I have seen more than one case positively injured by the use of even ordinary doses of strychnia." It is evidently a remedy of questionable value and should be used with caution. Erb speaks highly of galvanism applied with one pole to the sacrum, the other to the upper dorsal spine. The selection of poles he has found immaterial. Applications should be daily and gradually lengthened from twenty minutes to one hour. Faradism he has often found to be "positively harmful;" others have recommended it. Static electricity is a valuable tonic. Thick, heavy sparks have afforded great relief from pain, and the sharp muscular contraction caused by the spark improves the neuromuscular tone. In certain cases the persistent use of massage does much good. "It is a comfort and gratification to the patient; it counteracts muscular hypotonia, and overcomes hyperesthesia." The value of mental suggestion and the importance of maintaining the mental tone by every encouraging method at our command will commend itself to you.

The last but one of the most important measures to which I wish to call attention is the reeducation system introduced to the profession

about ten years ago by Fraenkel. Since that time it has steadily gained in importance and has been very much elaborated by Fraenkel and others. To give a comprehensive idea of the methods would require too much time, but the essential features of the plan are to submit the incoordinated muscles to graduated and systematic exercise. The exercise is for the purpose of reeducating the sensory paths and to produce memories in the corresponding areas of the brain. It should be in no way confounded with gymnastic exercises. Dr. Collins gives an excellent description of the plan. He says: "The underlying principle is that if the patient is made to overcome ataxia by the performance of simple movements with purposeful attention, the sensor-motor cortex will become reeducated through daily directing the movements with attention and conscious volition." The movements require skill, not force, and should be executed with the attention closely concentrated. The treatment requires much perseverance and patience, but "the benefit which follows is often most encouraging to the patient and gratifying to the physician." Patients who have become dependent upon crutches or a wheelchair have been so benefited as to be able to walk unaided. The patient begins by making simple movements performed deliberately, and with all the accuracy that he can command. These can be executed while lying in bed. They should be persisted in until they can be executed easily, accurately, and without effort. Then more complex movements are undertaken. A great number of variations can be devised, oftentimes by the patient himself, thereby giving him healthful mental exercise. The exercises should be practiced for a few minutes several times a day, but never to the point of producing fatigue. Dr. Collins summarizes the treatment of tabes as follows:

"1. The determination whether antisyphilitic treatment shall be undertaken.

"2. The utilization of electricity, hydrotherapy, massage, and counter-irritation.

"3. The education of the ataxic members, the rehabilitation of purposeful movements.

"4. The administration of the iodide of potassium in tonic doses, nitrate of silver, and restoratives.

"5. The relief of individual symptoms, such as pain, crises, dereliction of the function of the bladder, ocular palsies, amaurosis, and trophic disturbances.

"6. The adoption of a plan of treatment and carrying it through. This may be construed as psychical treatment if one so desires. However that may be, no one who has had experience in treating locomotor ataxia will be likely to deny its importance."

THE USE AND ABUSE OF ATROPIA IN EYE DISEASES.*

BY ADOLPH O. PFINGST, M.D., LOUISVILLE, KY.

While atropia is a drug frequently employed in medicine, we often see cases in which improper use has been made of it in the treatment of eye diseases. I do not refer alone to the promiscuous use of the drug by the practitioner for superficial inflammation of the eye, as of the conjunctiva, but to certain conditions where its use can be of real detriment to the vision of the eye in question, as in cases with increased intra-ocular tension. Much has been said and written to condemn its use in such cases, and it seems difficult to account for the persistence of this error. However, in looking over the subject in works on materia medica and finding that such men as Bartholow and Potter — the latter with an interrogation — make the assertion that atropine lessens the tension of the eyeball, the error seems in a measure pardonable. It dates back to the original investigations of Pflüger and Stoeker, who were believed to have found a reduction of tension following the use of atropia in the normal eye.

To illustrate that this error for a time crept into literature I quote from J. Mitchell Bruce's late work the following: "Intra-ocular tension is not diminished by the use of atropia, as is often stated, but is increased even in moderate doses." All of the latest authors on materia medica and ophthalmologists are now agreed on this point. While the tension of the eye may not in every case be increased, it is never diminished by the use of atropia.

In taking up this subject it will hardly be necessary for me to mention that the drug is the active alkaloid of the leaves of the *Atropa Belladonna*, and that the salt employed is the sulphate. Restricting myself to the local use of atropia in the eye, I would first call your attention to the three principal indications for its application. Ophthalmologists use it daily to paralyze the accommodation in determining errors of refraction. It is also largely used to dilate the pupil and to gain thereby information about the condition of the iris or to examine the fundus of the eye. However, for the latter purpose more transitory mydriatics, such as homatropine, are more useful.

Fifteen minutes after an instillation of atropia even in very weak solution (1:80,000) into a healthy eye, the pupil will be seen to become wider, and in thirty to forty minutes complete mydriasis has taken place. At the same time the accommodation, or power of the eye to fix close objects, begins to relax, and in about one and a half hours

*Read before the Falls City Medical Society, Louisville, Ky.

becomes lost. The effect lasts from eight to fourteen days—*i. e.*, it takes that long before the eye returns entirely to its normal state. During the time of its action there is more or less confusion of vision, depending upon the refractive error present, with an inability to see close objects, as ordinary print, distinctly. Knowing that by its use the patient would be deprived of the satisfactory use of his eyes, the drug should never be employed without due consideration of the results.

There has been much discussion as to the manner in which belladonna acts upon the eye, and the teaching has changed several times. It is now generally believed that mydriasis is due to stimulation of the sympathetic and paralysis of the oculomotor nerve at their peripheries, along with an action exercised directly upon the muscular fibers of the iris (Jessup). That the action is a local one, independent of the center of innervation, has been conclusively proven by the activity of atropia upon an eye after its removal from the orbit.

The usual form in which atropia is applied to the eye is in watery solution in strength varying from two to five grains to the ounce, according to the object of its use. It has been suggested that in combination with boric acid the solution will not deteriorate so rapidly and will be less irritating to the conjunctiva. In using the drug in refraction work, it is my custom to order only ʒ iss, and in inflammatory affections of the eye not more than ℥ ss. Large bottles (℥ ij or iij) of atropine solutions are often thoughtlessly prescribed, where a much smaller quantity would easily suffice. Atropia can be had in small gelatin disks which have become more or less popular in the last ten years. It has also been employed in the form of an ointment, though not extensively.

Whenever atropia is dropped into the eye it should always be borne in mind that the drug passes through the lacrimal apparatus into the nose and throat, where it may subsequently be absorbed and cause symptoms of atropinism. The individuals in such cases complain of dryness of the fauces, difficulty in deglutition, and sometimes nausea, dizziness, flushed skin, and rapid, occasionally fluttering, pulse. This effect can at least to some extent be avoided by making digital pressure upon the canaliculi at the inner canthus in order to avoid its passage into the nose. A curious inflammation of the conjunctiva also sometimes follows the protracted use of atropia. The patient, and especially individuals of fair complexion, may be so susceptible to the drug that the irritant action may affect the skin, causing a diffuse redness not unlike the rash of scarlatina (not punctate). The rash is sometimes followed by desquamation. The cause of this peculiar action has been attributed to impurities in the drug, to the

presence of microorganisms, to acidity of the solution, and various other possibilities. None of these theories have been conclusively proven by experimentation, and it is now generally believed that the action is due to a peculiar idiosyncrasy on the part of the patient, as the same preparation which causes rash in one individual may not affect another. The extract of belladonna or other mydriatics, as duboisine, hyoscyamine, or scopolamine, will have to be substituted in patients with this idiosyncrasy.

Omitting the use of atropia in refraction work, which is of interest only to the ophthalmologist, we find that the drug has its greatest field of usefulness in inflammations of the eyeball. By using it early in iritis it prevents adhesions of the iris to the lens (posterior synechia). It places the eye more at rest and diminishes the blood-supply, thereby lessening pain.

Atropia has a place also in the treatment of corneal ulcers, in which the iris is nearly always irritated and the eye painful. It can be used without regard to the position of the ulcer.

In phlyctenular and parenchymatous keratitis it is also useful. In the former it lessens the photophobia and lacrimation, and in the latter it insures a wide, movable pupil.

The action of belladonna upon the inflamed eye differs considerably from its action upon the eye in its normal condition. It not only acts slower, but is less efficient in its action and more transitory. To secure a wide pupil and keep it dilated in inflammatory conditions of the eyeball, a strong solution must be dropped into the eye frequently, sometimes as often as half an hour apart.

We should be especially cautious not to use atropia too freely in eyes predisposed to glaucoma by anterior or posterior synechia, or in older people who are more liable to glaucoma. Every one who has spent any time in the practice of ophthalmology will have seen cases in which attacks of glaucoma were brought on by the use of atropia. We also see a surprisingly large number of cases of uncomplicated glaucoma (acute or chronic) in which atropine was used until the vision was entirely destroyed, the severity of each attack being increased by the improper medication. To impress upon you the gravity of such an error, I will cite an unfortunate case of this kind:

Several months ago a woman about sixty years old applied to me with the history that her physician had been treating her eyes for months, and believing that she had a mature cataract now advised extraction of the lens. From her daughter I learned that she had at intervals in the last year suffered severe pain in both eyes. Her sight had gradually dwindled down almost to nothing, and had always been especially poor during the inflammatory attacks, when the eyes were

also injected. She had, upon the advice of her physician, been using atropia every two hours during these attacks.

Upon examination I found that she had no cataract, but there was marked pitting of both disks as a result of the high intra-ocular tension. The vision in one eye was entirely lost, while with the other she could count fingers at one foot on the temporal side. This was improved slightly by an iridectomy, so that she could count fingers at six feet.

When we consider that the sight is at stake, and the amount of damage which can be done by the improper use of atropia, we can realize the importance of knowing the indications and contraindications for its use before prescribing it.

There are practitioners who, though they profess to know but little of eye diseases, seem to practice as a routine measure the use of atropia in any inflammatory condition of the eye. So we see cases of conjunctivitis, blepharitis, eyes with foreign bodies in the cornea, and many other conditions, which have been treated with mydriatics; in fact, I saw a case last week in which a physician of this city had dilated the pupil for the relief of supraorbital neuralgia. The patient was much alarmed about the confusion of vision.

While in many of the simple inflammatory cases the patient is only put to the inconvenience of having blurred vision for several days, there are others in which the inflammation is aggravated by the use of atropia, especially cases of acute conjunctivitis.

PROFESSIONAL SECRECY.

BY LOUIS J. ROSENBERG, LL.B.,
Member of the Medico-Legal Society, New York.

Professional secrecy of any kind never received its deserved recognition at common law. Communications made by a client to his counsel were practically the only professional communications protected. Confidential communications made by *patient* to *physician* receive no protection whatsoever, either in England or in this country (Balton *vs.* Corporation of Liverpool, 3 Sm., 467; Duchess of Kingston's case, 20 Howell's St., Fr., 643; Baker *vs.* Railroad Company, L. R., 3 C., p. 91).

The Rule Stated.—But the embarrassments and vexations arising from leaving such communications unshielded soon became manifest, and the legislatures of the various States undertook to remedy it. Accordingly, they passed acts prohibiting physicians from disclosing any information acquired by them while attending patients in a professional capacity. This is now established law, and extends to facts

necessary to enable the physician to prescribe, and which are communicated to him for the purpose of enabling him to perform his professional duty. It also extends to information acquired by the physician through his *own* observation or examination. The information, however, must always be acquired while attending *professionally* (Eddington *vs.* Ætna Life Insurance Company, 77 N. Y., 571).

This rule of privileged communication is very strict, so much so that even the death of the patient does not render it infringible. A forcible statement of that part of the rule is that of Judge Earl in the case of Westover *vs.* Ætna Life Insurance Company, 99 N. Y., 59. Speaking for the court, the Judge said: "The purpose of the law would be thwarted, and the policy intended to be promoted thereby would be defeated, if death removed the seal of secrecy from the communications and disclosures which a patient should make to his physician."

In this case it was also held that even an executor or administrator cannot waive the privilege and thus break the seal. Judge Earl expresses himself in the following language: "An executor or administrator does not represent the deceased for the purpose of making such a waiver. He represents him simply in reference to rights of property, and not in reference to those rights which pertain to the person and character of the testator."

But this is not so in all the States. In Indiana and Michigan any personal representative of the deceased is permitted to waive the privilege (Morris *vs.* Morris, 119 Indiana, 341; Fraser *vs.* Jennison, 42 Mich., 206). Again, in Missouri, in the case of Thompson *vs.* Ish, 99 Mo., 160, it was held "that when the dispute is between the devisee and heirs at law, all claiming under the deceased, either the devisee or heirs may call the attending physician as a witness."

As to its Limitation.—In some States the protection of professional secrecy is limited to civil actions, as in California, for instance (see Cal. Code Civil Proc., par. 181, subd. 4). On the other hand, in New York, there are some decisions holding that the statute extends to criminal actions (People *vs.* Murphy, 101 N. Y., 126; People *vs.* Brower, 53 Hun., 217). Again, in a number of States the question is wholly undetermined. Some decisions hold that the statutes protecting professional secrecy extend to criminal actions, while others hold that they are only intended to protect matters civil. It is therefore quite difficult to state just how far the statutes actually do extend. This much, however, is certain, that professional communications are not privileged when they have an unlawful purpose, such as the commission of crime (Van Alstine, 57 Mich., 69).

As to its Waiver.—This privilege of professional secrecy is wholly for the benefit of the patient. Hence, the patient may waive the

privilege. Nay, he may even constrain the physician to testify everything that he communicated to him in a professional way.

Where there are two physicians, the patient does not, by calling one of his physicians as a witness, waive his privilege to object to the testimony of the other.

Where the patient desires to claim the privilege and objects to the admission of the incompetent testimony, he should do so when it is offered at the trial. His neglect to object may operate as a waiver (Hoyt *vs.* Hoyt, 112 N. Y., 493).

Whether a privilege once waived can be maintained at the second proceeding of the same case has been questioned. It might safely be stated, however, that at the present time the weight of authority is on the affirmative (see Grattan *vs.* Insurance Company, 92 N. Y., 274; McConnel *vs.* City of Osage, 45 N. W. Rep., 550; and Briesenmeister *vs.* Knights of Pythias, 81 Mich., 525). In this last case Champlin, C. J., speaking for the court, said: "The privilege conferred is that the physician shall not disclose or testify to those matters which the statute inhibits without the consent of the party to whom the privilege is extended, and this objection may be interposed whenever and as often as the parties' rights may be affected by proffered testimony, if the objection be timely made."

As to the rights of waiver by the executor, we have already incidentally remarked. It now remains to consider as to when the right of professional secrecy is enforceable.

As to When it is Enforceable.—Privileged communications are only protected where the relation of patient and physician exists; nor is this sufficient. The physician to whom the communication is made must be one legally authorized to practice. As a general rule, the relation of physician and patient is established irrespective as to who called the physician—patient himself, stranger, or other physician. So, too, if the attending physician calls in a professional colleague for consultation, the relation of patient and physician is at once created between the patient and that consulting physician. And in the case of Ætna Life Insurance Company *vs.* Deming, 123 Indiana, 384, it was held that the partner of a physician is not competent to testify as to what he learns of the condition of a patient when the latter is at the offices of the firm for treatment by the witness's partner.

Conclusion.—These are practically all the essential rules of law governing the subject of professional secrecy, as applied between patient and physician. One word more, however, might be pertinently inserted in conclusion: In addition to having the above outlined legal principles in mind, the physician should also consult his conscience. Adhering to the dictates of the law, and that of his conscience, he shall experience no difficulty in finding the path of safety.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

PROGNOSIS BASED ON HEMATOLOGY.

The rapidity with which the comparatively recent study of hematology has made itself an essential element of medical science is in itself significant of its value. There is now an extended list of diseases in which blood count or blood examination is absolutely essential to diagnosis. Leucemia, chlorosis, malaria, Hodgkin's disease, and relapsing fever, all demand blood examinations for their correct diagnosis. In differential diagnosis, an estimation of relative leucocytosis will often furnish the point which will make positive a doubt. Not only is this effective in deciding between primary and secondary anemias, but in diagnosticating between syphilis and malignant disease, between typhoid and malaria, between gastric ulcer and gastric cancer, blood examination reveals important points of distinction.

It is, however, in the matter of prognosis that hematology contributes important aids. In pneumonia the absence of leucocytosis is a grave sign. In diphtheria the leucocytosis should keep pace with the progressive infection, otherwise the disease may terminate fatally. In scarlatina, eosinophilia is a good indication. In appendicitis, an increasing leucocytosis may indicate an extension of the inflammation. In malignant disease the recurrence of a leucocytosis which has disappeared with the removal of a neoplasm indicates recurrence of the tumor. In phthisis the observation of perinuclear basophilic granules is said to suggest the uric acid diathesis, and this is unfavorable to tuberculosis.

This enumeration but partly covers the wide range of application of which the principles of hematology are susceptible, but suggests the wisdom of every practitioner making himself reasonably familiar with the fundamental facts of the science.

EDITORIAL NOTES.

Smallpox of Mild Type.

The mild epidemic of smallpox which has spread through nearly every State of the Union during the past two years is now becoming more wide-spread in Michigan and other States, and it is not expected that there will be any general decrease during the winter weather. Under these circumstances, the State Board of Health of Michigan considers it especially important that particular attention should be given to vaccination. Every person who has not been successfully vaccinated within the last five years should be revaccinated with virus known to be effective. All employers of labor should require certificates of successful vaccination as a guarantee that their operations may not be interrupted by an outbreak of smallpox.

Diabetic Diet.

The vitiation produced by routine habit is exemplified in the universal and indiscriminate withdrawal of carbohydrates from the diet of diabetics. Dr. J. S. Ely has recently recorded his observation that in a number of cases this has been followed by the development of coma, probably from the readiness with which proteid food yields acids in process of decomposition. To avoid this he suggests the institution of alkaline treatment prior to the reduction of carbohydrates. This is a practical point of which wide-awake practitioners will realize the significance.

Arab Immunity.

The Arabs are said to exhibit almost complete immunity to disease of the serous membranes. Abdominal surgery therefore has a special benignity with them, and joint diseases are exceptional. Rheumatism is almost unknown. The bacillus of Koch and that of pneumonia are, however, very active with them, and it is suggested that it may be this marked susceptibility to tuberculosis racially which may cause immunity to serous trouble.

Lumbar Cord Cocainization.

Medullary narcosis seems to be winning its way to popularity with the rapidity with which a new idol gains in favor. It is to be hoped the dangers of the method will not be ignored. There has been at least one death already reported from cocainization of the lumbar cord. Bier reports a list of unpleasant symptoms that may go on for eight days after the cocainization.

ITEMS AND NOTES.

YELLOW FEVER in Havana is decreasing.

YELLOW FEVER is epidemic at Leone, Nicaragua.

IT is stated that India has about half a million lepers.

THE growth of insanity in Italy is causing much alarm.

TWO deaths from plague are reported from Angel Island, California.

IT is reported that an epidemic of smallpox has broken out in Paris.

DR. NICHOLAS SENN has made a gift of $50,000 to Rush Medical College.

THE sale of patent medicines in Great Britain is greatly on the increase.

THERE are now fifty women in the medical department of the University of Michigan.

AT the recent election in Great Britain eleven physicians were elected to Parliament.

PROF. MAX VON NIESSEN has founded a new periodical devoted exclusively to syphilis.

THIS year there have been fewer entries into the medical schools of England than previously.

IN Switzerland the new regulations make medical examinations much stricter than heretofore.

BY the will of the late Dr. Hunter McGuire, an estate of over $150,000 is devised to his wife.

ON October 15 the golden professional jubilee of Dr. Kuenne, of Elberfeld, Germany, was celebrated.

THE rate of mortality from cancer in Hamburg rose from 71.63 per 100,000 persons in 1872 to 97.82 in 1898.

THE Boer prisoners at St. Helena are healthy, very few of them being in the hospital at the present time.

PROF. C. TERNI has completed his study of yellow fever and the plague in Brazil, and has returned to Italy.

According to the last annual report, the birth-rate in Milwaukee county, Wisconsin, exceeded the deaths by 6000.

Typhoid fever is raging in the cement regions of Philadelphia, where the malady baffles physicians and surgeons.

At the present time there is a dearth of physicians in Ireland, accounted for by the demand for the South African war.

A "Festschrift" was presented to Professor Kaposi, of Vienna, on the occasion of the twenty-fifth anniversary of his professorship.

Great interest is manifested in the choice of the successor of Dr. Lister, president of the Royal Society, whose term of office has nearly expired.

Dr. Cavalli, who accompanied the Duke di Abruzzi on his arctic trip, has been made a Commander of the Order of the Italian Crown.

Bhagvat Sinhjee, ruler of the Indian State of Gondal, is a medical man. He holds degrees from Edinburgh, London, and Oxford.

It is announced that the Copenhagen Academy of Medicine has proposed Professor Finsen as a competitor for the Nobel prize in medicine.

It is reported on good authority that the estimated cost to the city of Glasgow of the recent visitation of the bubonic plague was nearly $5,000,000.

The French government has forced Dr. Devillers, who recently fought a duel with Dr. Pozzi, to pay 3000 francs for assaulting a member of the French Senate.

Over 1500 persons suffered injuries requiring medical attendance in the crowds that assembled in London a short time ago to welcome home the troops from South Africa.

The Jenner exhibit at the Paris Exposition was designed by Professor Hubert, of Russia, and was a history of vaccination, with special reference to Jenner himself.

The Jewish Hospital for Consumptives at Denver, Colorado, is claimed to be the only institution in the world where tubercular and pulmonary diseases are treated gratis.

The Philadelphia physicians, who have given their services gratis as inspectors of the public schools of that city, are now making an effort to be paid for their future work.

An establishment for the giving of sun baths has recently been opened in Strelau, a suburb of Berlin, and is extensively patronized. Many Berlin physicians prescribe these baths for nervous complaints.

A bust of Dr. George B. Wood, formerly professor of practice of medicine and trustee in the university of Pennsylvania, has been bought, and will be placed in the library building of that institution.

In Chicago a college for nurses has been founded, with the intention of "giving women training in all duties of skilled nurses without requiring two years of bondage in hospitals and training schools."

On October 26 Dr. R. Beverly Cole, of San Francisco, ex-president of the American Medical Association, was tendered a banquet, to celebrate the semi-centenary of his entry into the practice of medicine.

After four years of research in the Orient, Dr. Yersin has returned to Paris. He will return to Tonquin in the near future, but not until he has presented his official report of his antiplague serum to the authorities.

Dr. Frederick Peterson, president of the board of managers of the Craig Colony for Epileptics at Sonyea, New York, offers a prize of $200 for the best original unpublished contribution to the pathology and treatment of epilepsy. The prize is open to universal competition.

Plans for the new Jefferson Hospital, which will be erected at Tenth and Sampson Streets, Philadelphia, are now under consideration by the architect and trustees. When the building is completed it will be one of the most convenient and perfect structures of the kind ever built.

A number of rooms in the Service Building of the Pan-American Exposition, Buffalo, are being utilized as temporary quarters for the medical department of the exposition. As there are at present over 3000 workmen at work every day, numerous emergency cases have occurred.

At the last meeting of the St. Louis Academy of Medical and Surgical Sciences, the following officers were elected for 1901: President, Dr. Emory Lanphear; senior vice-president, Dr. Carl Pesold; junior vice-president, Dr. H. S. P. Lare; secretary, Dr. O. L. Suggett; treasurer, Dr. G. M. Phillips; orator, Dr. Wm. Porter; librarian, Dr. H. G. Nicks.

CONTRACT surgeons in the army, or acting assistant surgeons with the honorary rank of first lieutenant, have been decided by the comptroller of the treasury to be neither officers nor enlisted men, and hence not entitled to the ten-per-cent increase in pay provided under a recent law.

EVERY ten years the Stockholm Medical Society will give a gold medal to honor the memory of Pasteur. The one receiving it must be a scientist whose works have done most to promote bacteriology or hygiene. Max von Pettenkofer, of Munich, has had bestowed upon him the first medal.

MASSAGE as a separate and independent study is the latest novelty at the Berlin University. Two courses of massage — one of six months' duration for students and one of one month for doctors— will be held under Professor Zabludowski's direction at the new University institute for massage and Swedish gymnastics.

FIFTY thousand dollars has been given to the College of Physicians and Surgeons of Chicago for endowment purposes by two Chicago physicians who are members of the faculty. Dr. William E. Quine, dean of the school, gives $25,000 to endow the college library, and Dr. D. A. K. Steele gives $25,000 to endow the pathological laboratory.

QUEEN VICTORIA has granted her permission to Sir William MacCormac to accept and wear the "Kaiser Wilhelm Commemoration Medal," bestowed upon him by the German Emperor in recognition of services rendered during the war of 1870–71. The medal was instituted in memory of his late majesty the Emperor and King William I., "Der Grosse Kaiser."

THE Mississippi Valley Medical Association will hold its next annual meeting at Put-in-Bay, Ohio, on September 10, 11, and 12, 1901. The officers for this meeting will be: President, Dr. A. H. Cordier, of Kansas City, Mo.; vice-presidents, Drs. C. F. McGahan, of Aiken, S. C., and Charles L. Minor, of Asheville, N. C.; secretary, Dr. Henry E. Tuley, of Louisville, Ky.; treasurer, Dr. Dudley S. Reynolds, of Louisville, Ky.; chairman of Committee of Arrangements, Dr. J. C. Culbertson, of Cincinnati.

ACCORDING to the *Journal of the American Medical Association*, the members of the profession in Spain and Spanish-speaking America have organized for closer fellowship. The president of the association is J. Calleja, of Madrid, and a prominent physician in each country has been appointed to found local societies in affiliation with

the central committee—Dr. Ulecia for Cuba, Cajal for Mexico, etc. The new Union Medica Hispano-Americana hopes to publish an official organ in time. The triennial meetings will occur on the occasion of the international medical congresses.

THE *Stockholm Dagblad* states that it has taken four years to realize and bring into shape the vast estate of the inventor of dynamite to comply with the conditions of the will in regard to the endowment of the famous Nobel prizes, each of which is a fortune in itself. It is anticipated now that the five prizes can be awarded in 1901. Physicians are interested, as one of the five is for "progress in medicine." No notice will be taken of personal applications. The committee in charge of the physics and chemistry prizes has already requested suggestions from the professors of these sciences at the principal universities of the world, including Rome, Leyden, St. Petersburg, and Chicago.

OFFICERS of the United States revenue cutter *Rush* report that the Indians of the Aleutian Islands, as well as those of the Alaskan peninsula and on the mainland, are dying at an alarming rate. The *Rush* was engaged during the summer in Indian census enumeration. Attu Island, in past years densely populated with Alaskan natives, contains only seventy-three, and Atka, the largest island of the group, has an Indian population of but one hundred and seventy-five. That island half a century ago supported a great tribe. Last season measles and pneumonia carried off the Indians by the score, and should these diseases become epidemic again next year the archipelago will become almost depopulated.

THE *Philadelphia Medical Journal* records the following remarkable display of nerve and will-power which was recently witnessed at one of the Reading hospitals, where a young man had both of his legs crushed in attempting to jump from a moving freight train on the Reading Railway. In speaking of the accident, he said: "The moment I dropped to the tracks, I felt the wheels passing over my limbs, and that they were gone. I did not faint, but realizing the fact that I would bleed to death unless something was done quickly, I set to work with a view of stopping the flow. I first tied up my right leg with my handkerchief, and while I was doing this a companion who had been more successful in jumping the train than myself came along and let me have his handkerchief, and with this I bound up the left limb." He urged the driver to hurry while on the way to the hospital, and said if he did not he would take the reins himself. He did not want ether administered so that he might witness the amputation.

NEW PUBLICATIONS.

HISTOLOGY.

This most recent addition to works on practical histology is made up of a translation of the lectures and courses in histology given to students in the University of Munich by A. A. Bohm and M. von Davidoff, to which has been added several sections on the nervous system by G. Carl Huber, whose work along these lines has been the most complete that has been done up to the present time.

The book is profusely illustrated, the cuts being for the most part those of the authors. The sections on the microscope and on technique are complete, and the latter contain only such formulæ as have been thoroughly tried and found of value.

The book will be welcomed by all workers in this branch of medicine.

A Text-book of Histology, Including Microscopic Technique. By A. A. Bohm, M.D., and M. von Davidoff, M.D., of the Anatomical Institute in Munich. Edited, with Extensive Additions to Both Text and Illustrations, by G. Carl Huber, M.D., Junior Professor of Anatomy and Director of the Histological Laboratory, University of Michigan. Authorized Translation from the Second Revised German Edition by Herbert H. Cushing, M.D., Demonstrator of Histology and Embryology, Jefferson Medical College, Philadelphia. With 351 Illustrations. Philadelphia: W. B. Saunders & Co.; 161 Strand, W. C., London; 1900.

OBSTETRIC CLINIC.

The volume contains thirty-nine lectures, in which the author practically covers the whole field of obstetrics, and makes many diversions to such related subjects as criminal abortion, infanticide, illegitimacy, the restriction of venereal diseases, the regulation of prostitution, and other medico-sociological subjects. Taken together the lectures form a practical manual of the subject of which they treat. The author writes clearly and tersely, and his work is interesting and edifying.

Obstetric Clinic. By Denslow Lewis, Ph.C., M.D. A Series of Clinical Lectures on Practical Obstetrics Delivered to Students and Practitioners in Cook County Hospital, Chicago. Chicago: E. H. Colegrove, 65 Randolph Street.

THE PRACTICE OF MEDICINE.

Among successful manuals of the practice of medicine for students and practitioners this must hold a high place, having achieved a fourth edition in two years. The present edition shows numerous improvements and additions, foremost among which are those in connection with the section of Diseases of the Digestive System. In the present day, when brevity seems to be aimed at in manuals at the expense of completeness, it is gratifying to find a work which so fully meets the mature needs of the student of medicine.

A Text-book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D. Illustrated. Fourth Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders & Co., 1900.

A TEXT-BOOK OF PATHOLOGY.

The third edition of this excellent manual has been thoroughly revised and brought up to date, and the section of pathologic physiology considerably amplified. The work has already found much favor with the profession, and the author's aim of providing a moderate-size book upon a ponderous subject has been successfully achieved.

A Text-book of Pathology. By Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. With 372 Illustrations. Third Edition, Revised. Philadelphia and London: W. B. Saunders & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Reduction of Strangulated Hernia by Compresses Soaked in Ether.

At a recent meeting of the Paris Académie de Médecine, M. Fiessinger made a communication on the prolonged application of compresses of ether in strangulated hernia. He found that the majority of cases of strangulated hernia, formerly calling for operative interference, yield to this simple means. In January, 1900, M. Fiessinger published the history of a case of crural hernia, strangulated for forty-four hours, and reduced by compresses soaked in ether applied during three-quarters of an hour. The hernia disappeared of itself, after three attempts at taxis had failed, although the patient was much exhausted by fecal vomiting during the previous twenty-four hours. He has since received several letters from other practitioners relating to the history of similar cases with repeated success. After a lapse of time varying from a quarter of an hour to two hours the hernia—crural, inguinal, or umbilical—disappeared of itself, or after a slight and insignificant pressure by the surgeon. The ether is allowed to fall, drop by drop, on a compress, such as a handkerchief or piece of gauze, which is thus always damp. The quantity of ether used in one case amounted to 250 grammes. The method was almost marvelous in its results, most painless in application, and of great service to the country doctor. During the first thirty-six hours there was every chance of success; after this period it would be better not to attempt this method, owing to the risk of returning a gangrenous loop into the abdomen. He thought that the ether acted reflexly, causing a great vasoconstriction. The loop of intestine was no longer congested, and reentered the abdomen as easily as it slipped out. Ether is more practical than ice, being more easily obtained and possessing greater power.

Surgical Treatment of Rectal Prolapse.

W. Krajewski (*Przeglad Chirurgiczny*, iv, 539, 1900) discusses in detail the various operative procedures for rectal prolapse. With regard to the different measures for narrowing the anus and rectum, such as the excision of radiating folds of the anus and posterior rectorrhaphy, with or without torsion of the lower end of the intestine,

he comes to the conclusion that they only remove one morbid condition, the anal relaxation, leaving untouched the weakened suspensory apparatus and the dilatation of the rectal ampulla. He gives details of five cases in which he operated by another method, namely, that of amputation of the prolapsed portion or Mikulicz's operation, but sums up on the whole against it, as after it the prolapse may be reproduced, and the cicatrices may cause rectal rupture or stenosis. This operation is to be restricted to the cases in which the prolapse is irreducible or complicated by ulceration or necrosis. For all other cases he is inclined to recommend fixation of the prolapsed intestine either below (rectococcypexis) or above (colopexis) in such a position as will prevent its descent; but the operations of Gerard-Marchand and Jannel, which aim at the accomplishment of these maneuvers, have yet to be tested and probably modified.

Treatment of Spina Bifida.

C. Hennemann (*Münch. Med. Woch.*, Oct. 2, 1900, p. 1380) relates a case of spina bifida with hopeless prognosis — anesthesia of both legs, vesical and rectal incontinence, extensive bed-sores—presenting in a patient about eighteen months of age, which it was his good fortune to cure after several injections with one ounce of Lugol's solution. The child walks, the bowels are under control, and micturition, which occurred in continual dribblings, can now be postponed for several hours. Hennemann suggests that the treatment be attempted in every case of spina bifida.

MEDICINE.

Gastroptosis.

G. R. Lockwood (*Medical Record*, Dec. 1, 1900) says that in the great majority of cases an adequate cause for gastroptosis is not discoverable.

That gastroptosis does not of itself, in an uncomplicated form, produce symptoms.

That the displacement of the stomach, however, is a predisposing cause of a variety of gastric neuroses, of sensation, motion, and secretion.

That these neuroses are usually induced by some definite mental or physical strain.

That the displacement of the stomach is a strong exciting cause of muscular atony; that atony is the most common cause of the symptoms presented.

That a complicating atony is associated with a more or less profound neurasthenia, and that a direct relation exists between these two conditions.

That gastric acidity is increased in direct proportion to the atony, unless counteracted by gastritis.

That mild degrees of gastritis are apt to occur in stomachs that are displaced, but the symptoms are neither severe nor persistent.

That gastritis occurring in atonic and displaced stomachs reduces the excessive acidity of these cases and seems to modify the severity of symptoms.

That atonic dilatation without mechanical hindrance is exceedingly rare.

That dilatation, or better, muscular insufficiency, may occur in gastroptosis from duodenal kinking, from arterio-mesenteric constriction, or from pyloric spasm.

That pyloric spasm is common in displaced atonic stomachs with hyperacidity, and may lead to a temporary dilatation.

That in a large number of cases inattention to the conditions of atony, of neuroses, and of gastric secretions has led to an unsuitable, insufficient diet which reacts both on general nutrition and on local conditions within the stomach.

That surgical intervention is applicable only to the cases in which dilatation exists.

Prognosis of Pneumonia.

Huchard, in a clinical lecture (*British Medical Journal*, Nov. 10, 1900), describes the case of a woman, aged forty-four, admitted under his care with pneumonia. There was a considerable degree of obesity. The disease had already lasted some days, and physical signs showed scattered patches of consolidation in the right lung. There was rusty sputum; dyspnea was intense, but pyrexia was never a very marked symptom. Diuresis was free, but there was a considerable amount of albumin present in the urine. The patient died, and on post-mortem examination a right-sided pneumonia was found with some pleural effusion. The chief point shown by examination of the organs was a general fatty infiltration and degeneration.

The lecturer showed that in all cases of pneumonia where adiposity is a marked feature the unhealthy condition of the organs is a very much more important factor than the actual amount of lung disease or the degree of pyrexia. It is on this account that the prognosis of pneumonia is so good early in life, but so grave in later years. In cases such as this Huchard recommends bleeding to relieve the heart, and subsequently the administration of digitalis. Theobromine in

small doses is also serviceable. The diet ought to be exclusively milk. Another point on which Huchard lays considerable stress is the amount of chlorides present in the urine. He states the fact that in every case of pneumonia in which the total chlorides fall below one gramme the prognosis is very grave. Whatever be the explanation, the absence of chlorides in the organism indicates a fatal prognosis. Chlorides are absolutely necessary for gastric secretion and for the maintenance of nutrition, and accordingly Rommelaere states that those cells which chiefly require chlorides die under such conditions. The estimation of these salts, therefore, in the urine should not be neglected, as is so frequently done, as the amount of chlorides will help to indicate the prognosis. It is suggested that when chlorides are absent they should be replaced by means of salt injections, well-salted foods, etc.

Etiology of Chorea Minor.

T. Frolich (*Norsk Mag. f. Lægevidensk.*, September, 1900; *British Medical Journal*, Nov. 10, 1900) deals with forty-seven cases of chorea minor treated during seven years in the hospital of the University of Christiania. The age of the patients varied from three to sixteen years, and in twenty-eight of them the disease had begun from seven to eleven years previously. Thirty-nine were girls and eight boys. In twenty-four cases there was the family history of rheumatism or of psychical affections. Among the forty-seven patients there were fifteen who had had rheumatic fever, either before or during the chorea, and in sixteen (thirty-four per cent) the chorea had begun or had been accompanied by febrile phenomena with angina, articular affections, or erythema nodosum. In these thirty-one cases the author recognizes the element of infection; in four others the chorea had undoubtedly followed infectious diseases, such as scarlet fever and influenza; and in the remaining twelve instances there was some slight evidence or possibility of infection. It is therefore claimed that in 80.85 per cent of the cases the element of infection was definitely proved. Frolich specially refers to an interesting case in which the patient was first attacked with gonorrheal vulvovaginitis, then with chorea, with endocarditis, and finally with monarticular gonorrheal rheumatism.

Intestinal Antisepsis in Children.

In a paper read before the Thirteenth International Medical Congress, G. G. De Tommasi and F. Frede have, from the studies on this subject, reached the following conclusions:

1. In all pathologic conditions with autointoxication and autoinfection from the gastrointestinal tract, whatever may be the severity and symptomatology, some intestinal antiseptic may be given with advantage. The best representative of this class of remedies, according to their experiments, is calomel in fractional doses.

2. The best results in the use of internal antiseptics are obtained by early administration of these remedies—*i.e.*, when the toxins have not yet had time to invade the whole organism and to poison the nerve centers, thus disturbing the organic functions.

3. The writers counted the number of bacterial colonies found in cultures before and after the administration of the antiseptics. They found, for example, that they counted in one case 1050 colonies before and only forty after the use of calomel. They also observed that the administration of this drug was followed by a diminution of the virulence of the cultures and diminution of the compound sulphur acids in the feces.

4. They studied the relative efficiency of (*a*) salol, in doses of 5 to 10 centigrammes up to 0.50–1 gramme per diem; (*b*) tincture of iodine, 10 to 15 drops, according to age, in a mucilaginous mixture, a teaspoonful every two hours; (*c*) calomel in divided doses of ⅓ centigramme up to 12 centigrammes per day. The last-named drug was found to be the most efficient of the three.

The Cellular Diagnosis of Tuberculous Meningitis.

At a recent meeting of the Paris Society of Biology, M. Widal, M. Sicard, and M. Ravant (*Lancet*, Nov. 3, 1900) laid before the society an account of researches made by themselves into the histology of the serous effusions which occur in cerebrospinal meningitis and in tuberculous meningitis. The methods employed were the same as used by them in their researches upon pleurisy. Normal cerebrospinal fluid contains no morphological elements. In acute diseases, such as typhoid fever, acute phthisis, Buhl's disease, morbus cordis with anasarca, and in various nervous diseases such as general paralysis, disseminated sclerosis, hemiplegia, chronic chorea, and cervical caries, the cerebrospinal fluid still contains no cells. In the fluid from cases of acute meningitis, however, the observer may see various morphological elements. In twelve cases of tuberculous meningitis, the diagnosis being verified by a post-mortem examination and the disease having occurred in patients of different ages, lymphocytes were numerous. In two cases red blood cells predominated; in four cases there were a few polynuclear elements; injection of the fluid, however, never produced a secondary infection. In two cases of cerebrospinal

meningitis the polynuclear elements were more numerous than the lymphocytes, and that to a very marked degree. Lymphocytosis is therefore characteristic of the effusion of tuberculous meningitis.

Recovery from Leprosy.

Mr. Jonathan Hutchinson, in the *Indian Medical Record* of October 31, 1900, reports two cases of anesthetic leprosy which recovered after an extended treatment which consisted only in small doses of arsenic, a liberal diet, and abstinence from fish. Of late years, says Mr. Hutchinson, it has been shown that in not a few cases of leprosy recovery occurs. They have been chiefly observed in countries where the disease is not endemic, and in patients who migrated from the place where the disease was acquired, and lived under wholly altered conditions. In former times the leper had no chance, but now the disease is looked upon much more hopefully. The essentials to recovery are a liberal diet, external comforts, and entire abstinence from uncooked fish. In olden times the leper was an outcast, condemned to poverty and the poorest food. If he got access to a leper asylum, he would very probably be fed on fish. To a considerable extent this is changed. The leper establishments now allow a more judicious and liberal diet, and from one, that of Robben Island, where recoveries have been chiefly claimed, fish is wholly excluded. The best examples of cure have come, however, not from asylums, but from private practice and from cases in which, as in the United States, the patient has migrated to a non-leprosy district and has been able to secure plenty of non-leprosic and antibacillary food.

Feeding in Typhoid Fever.

The bacillus typhosus, says W. M. Brown (*Medical Record*, Dec. 1, 1900), while the initial, is not the preponderating, factor in the toxemia. In ordinary cases the functions of digestion are attended by heat production, which is varied in amount by the kind of food ingested, proteids and carbohydrates giving the least number of heat units while promoting the most effective digestive fluids. The process of digestive secretion is accompanied by a transudation of certain portions of the cell substance in the various glands, which require considerable time for restoration before they are capable of efficient work; hence we should not feed too often. An inefficient digestion leaves a large residue of food which undergoes fermentation, causes distention, increases the danger of hemorrhage and perforation; it also forms a favorable culture medium for the various bacteria, so increasing the

oxemia, which in turn hastens the disintegration. Milk unprepared is not a liquid food, and will take as long to digest as many solid foods.

Diabetes Mellitus in Children.

L. F. W. Haas (*Journal of the American Medical Association*, Nov. 17, 1900) says that diabetes occurs more frequently in children than is generally supposed. Uranalysis is just as important an element in the scientific diagnosis of disease in children as it is in adults, and it is greatly to be regretted, says the writer, that the general practitioner rarely realizes this fact. There is a possible etiologic connection between peliosis rheumatica and diabetes. The pathogenesis of both conditions is so obscure, however, that speculation on this question can only point out a direction for further research.

THERAPEUTICS.

Note on Thyroid Extract in Cretinism.

J. H. Musser (*International Medical Magazine*, November, 1900) contributes the following notes on the therapy of thyroid extract in cretinism:

Thyroid extract is of value in cases which may be classed as border-land cases of cretinism—that is, some features of each case were those of a cretin, but many were lacking, so that it was not a fully developed cretin.

Thomas G——, a child of four, was plump and rotund, but flabby. He seemed vigorous physically. His growth was stunted. His countenance was heavy and abject, his lips thick, his mouth open, and his tongue often partially protruding. No other characteristics about the face. His abdomen was large. He was not apt in learning; he was unclean in his habits. He could not be taught to urinate and defecate properly. He was a rapid, gluttonous eater. He was more irresponsive to questions than normal, and was dull of understanding. He did not understand the reproval of his parents. He could not be trained.

Thyroid extract in one- to three-grain doses was given each day. Rapid improvement took place, and in fifteen months he was changed in physical appearance and mental acuteness.

Another, a girl aged nine, was backward mentally. She had thick lips and large, partially protruding tongue, with salivary dribbling. No other suggestions of cretinism in physical appearance of face or

trunk. She was unable to read, and indeed to learn the letters. She did not have any memory apparently. In some things she was bright. She was trained with the greatest difficulty into habits of personal cleanliness. She was more peevish and fretful than a cretin, and more childish than idiotic. She improved with the administration of thyroid extract in tablet form, and also of the powder sprinkled on her food. She is now bright, intelligent, and physically robust.

Other cases of partial cretinism, not even as far advanced as the above, could be cited, as that of a lad aged six, who was backward mentally, unclean in habits, and subject to violent fits of temper and attacks of causeless diarrhea. He presented no physical appearances of the cretin. He got well with the extract.

It is not necessary to refer to the use of thyroid extract in myxedema and in myxedematous states. Its value in obesity is well known. It is a powerful remedy, and must be used with caution. A daily dose or one every second day may be sufficient. Musser gives one half to one grain to children, and five to ten grains to adults.

Methylene Blue in the Treatment of Various Gynecologic Affections.

Methylene blue (medicinal) has been rather extensively employed by Drs. Chaleux Vivie and Kohler (*Archivos de Gin., Obstet. y Pediat.*, Oct. 10, 1900; *Merck's Archives*, November, 1900) in various gynecologic affections. They reported their results in detail to the Society of Gynecology, Obstetrics, and Pediatrics, of Bordeaux. The cases were those of chronic endometritis, metritis, parametritis, erosions of the cervix, leucorrhea, vaginitis, dysmenorrhea, metrorrhagia and menorrhagia, etc. The results have been very favorable and have led them to formulate the following conclusions:

1. Methylene blue (medicinal) when it is employed in concentrated solution, or, still better, in the form of powder, is an important therapeutic agent in the treatment of metritis—painless, non-caustic, and non-toxic.

2. It stops very rapidly metorrhagia and menorrhagia.

3. It diminishes leucorrheal discharges.

4. It sometimes diminishes or completely suppresses pain due to the various gynecologic troubles.

5. This anesthetic action is especially noticeable in dysmenorrhea accompanied by an alteration of the uterine mucosa.

6. Affections of the adnexa and of the parametrium are very favorably influenced by the treatment with methylene blue (medicinal).

Methyl Salicylate in the Treatment of Acute and Subacute Rheumatism.

In a paper read before the Thirteenth International Medical Congress (*Merck's Archives*, November, 1900) Dr. Corma reported eighty-five cases of acute and subacute rheumatism which he had treated with methyl salicylate. He had used it internally, commencing with fifteen to thirty minims a day, and increasing the daily doses up to two or two and a half drachms. In all the cases the author found it to be equal to sodium salicylate both in its antipyretic and analgesic power, while being better borne by the stomach. Some patients, however, could not bear it, showing the following unpleasant symptoms: Noises in the ears, headache, vertigo, dryness of the throat, nausea, vomiting, burning in the stomach, etc. The absorption of methyl salicylate is very rapid, as in most cases salicylic acid can be discovered in the urine fifteen to twenty-five minutes after the administration of the drug. The author has also demonstrated the presence of salicylic acid in the saliva, in the pleuritic serum, in ascitic fluid, in the serum obtained by the application of a blister, etc.

Urotropin in the Treatment of Vesical Catarrh and its Complications.

Dr. E. Suppan (*Wien. Med. Blätt.*, No. 28, 1900) says that this drug is the best we possess for the internal treatment of vesical catarrh and its complications. He thinks that it should always be employed in every case of urosepsis of the aged, with prostatic hypertrophy, in all the non-acute and septic bladder and pelvic catarrhs which are the consequences and complications of this growth, as also in inflammatory conditions dependent upon atrophy of the prostate, neoplasms and diverticulæ of the bladder, and stricture. By the use of this drug the fatal termination may be avoided in many otherwise hopeless cases, and in others its continuous administration may so influence threatening symptoms that the patient may live for many years thereafter without serious disturbance to his health.

The author concludes urotropin is a very efficacious remedy for the treatment of diseases of the urinary passages, being invaluable in certain forms, and there is no other drug in our armamentarium that will take its place.

Acetopyrin, a New Antipyretic.

Winterberg and Braun (*Wiener Klin. Woch.*, No. 39, 1900) report upon acetopyrin, which occurs in the shape of a whitish powder composed of antipyrin and acetyl salicylic acid, and with which they have experimented in about one hundred cases without encountering any deleterious or disagreeable effects upon the stomach or bowels, even

with daily doses of from five to seven grammes. They missed the auditory symptoms and the protracted sweating noticeable with the salicylic medication. Acetopyrin was very beneficial in cases of acute rheumatic arthritis, neuralgia, megrim, etc., even in those which resisted the salicylates. They also noted favorable action in four cases of typhoid and one of epidemic cerebrospinal meningitis, and in acute inflammations of the pleural and pericardiac membranes. The antipyretic influence of the drug is prompt and decided. The usual dose consists of six powders of five decigrammes (about seven grains) each, administered through the day, but this may be made considerably larger without producing untoward effects.

Sulphur Waters in Gall-stone.

Winckler (*Therap. Monatsh.*, 1900, No. 5, in *Centralblatt f. Inn. Med.*, No. 41, p. 1046) relates the case of a patient affected with gall-stones who derived no benefit from a season at Carlsbad, and was cured by the use of sulphurous waters. The cholagogue efficiency of the medication appears from the typical green stools occurring after a few days of the treatment. Winckler concludes that in cases of gall-stone colic, in lieu of alkaline waters whose cholagogue efficiency is at the best problematic, preference should be given to the sulphurous springs. From a dietetic standpoint he deprecates the use of eggs, the yolk of which contains about one-half per cent of cholesterine, and he would like to see the use of bread restricted on account of the cholesterine in cereal seeds.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,

Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine

Amaurotic Family Idiocy.

Michael Mohr (*Archives of Ophthalmology*, November, 1900), after most thorough investigations carried on in the institute of Professor Tangl, concludes a most interesting paper as follows:

1. Amaurotic family idiocy is a well defined, independent disease.

2. Chief symptoms: The infant is born normal and develops for some months or a year without any physical or mental disturbance; then it loses strength; the back and the extremities become weak; paralyses appear, sometimes spastic, sometimes flaccid; the reflexes may be normal, diminished, or increased. Vision is lost; in both eyes the typical white patch appears at the macula, with the cherry-red

spot in its center, on which the diagnosis rests. Later the disks become atrophic. The strength continues to fail, and the infant usually dies before the second year of life. Usually several members of a family are attacked.

3. Anatomical changes: A great destruction of fibers in the brain, medulla, and cord, particularly in the pyramidal tracts. An absence or rudimentary presence of the pyramidal cells, at some points fatty degeneration; hypertrophy of the neuroglia.

In the eye: Edema of the macula lutea, increase in the ganglion-cell layer, atrophy of the optic nerve.

Recovery of Mind and Sight in Insane Patients Following the Successful Removal of Cataracts.

Dr. Wm. C. Posey read a paper with this title before the Philadelphia County Medical Society, October 10, 1900. The first case reported was that of a man aged forty-five, whose vision had gradually failed for three years. Soon after his mind also became affected, until finally he became subject to delusions of persecution and was committed to the insane asylum at Norristown. Two weeks after the operation for cataract the man showed marked improvement of the mental symptoms. Glasses were given at the end of one month, with vision almost normal. At this time the mental functions had so much improved that he was allowed to return home, apparently free from the evidences of insanity, and now, at the end of two years, apparently is well.

The second case was that of a woman aged sixty, who had also complained of gradual loss of sight, followed by delusional insanity. After the removal of a senile cataract normal vision was restored, and with it the mental symptoms improved rapidly.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Is Coryza Contagious?

Fermi (Proc. Med. Soc. at Sassari, in *Münch. Med. Woch.*, Oct. 2, 1900, p. 1406) reports upon a series of inoculations with nasal and buccal secretions of sixty different patients affected with coryza attempted upon himself and others. Not once in the four hundred experiments was the attempt at transmission successful, nor did he note any different result from forty different attempts at inoculation with influenza.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

The Relation of the Neurofibroma to the Fibroma Cutis.

In presenting a case of neurofibromata to the Cincinnati Academy of Medicine (*American Journal of Dermatology*, July, 1900), M. L. Heidingsfeld said in part that the fibroconnective tissue of the skin has but little tendency to reduplicate itself in the nature of tumor formation, which is a fact that has received little recognition. True fibroid tumors belong to the rarest forms of pathological changes affecting the skin, and this fact is all the more striking when we consider how commonly they occur in other organs—*e.g.*, the uterus—and how very predisposed by reason of injury and insult is the skin, compared with other organs.

The converse, however, is true of the other elements of the skin. The epidermis, sudoriferous and sebaceous glands, lymph and blood-vessels, fat, all show at times marked tendency to hypertrophy and enlargement to the degree of inducing tumor formation, benignant or malignant in nature. For many years the utmost chaos existed regarding all forms of tumor enlargements of the skin, a multitude of which at one time or another have been classed with the fibromata under the name of fibroma molluscum, molluscum fibrosum, multiple fibromata of the skin, congenital and acquired elephantiasis. In addition to these, many cases of syphilides, pigmented moles, nævi materni, and similar formations, all of a distinctly epithelial character, many belonging to the class of congenital malformations, have also at one time or another been classed with fibromata.

True fibroid tumors of the skin occur mostly in two forms—true or false keloid. False keloid consists of fibroconnective tissue, but inasmuch as it occurs from accidental causes, and shows a stronger tendency to diminish and disappear than to increase or to grow spontaneously, it cannot properly be classed with the tumors or new formations. In true keloid we have a distinct fibroconnective tissue tumor of the skin, a true fibroma. In structure it does not differ very materially from false keloid; and probably for this reason, if no other, we are justified in classing false keloid with the fibromata. The mass of the tumor consists of strands of fibroconnective tissue, which is constantly increased by additions of fibroconnective tissue cells undergoing fibrous formation.

The fibroma molluscum is a neurofibroma, and the conclusions we

draw from our investigations and study are that the neurofibromata form a class separate and distinct from the fibromata cutis. They differ materially both clinically and pathologically. Clinically they are soft, translucent, freely movable under the skin, and can be made to disappear into slit-like openings along the subcutaneous nerves, from which they probably originate. The fibromata are firm, hard, non-translucent, and firmly adherent to the cutis, from which they originate. Nervous conditions frequently predispose and often complicate the neuromata, paresthesia, anesthesia, hyperesthesia, etc. In fibromata such disturbances are rare, and probably accidental in character. They differ widely in their pathological appearance, both gross and microscopic, and under low- and high-power examination. Trauma is a very important factor in the causation of true fibroma, an unimportant one as regards neuroma. Neuroma is of relatively frequent occurrence, and is multiple in nature; fibroma is very infrequent, and is usually solitary.

Epithelioma Manus Dorsalis.

At the meeting of the Academy of Medicine of Cincinnati, September 24, 1900, M. L. Heidingsfeld presented the following interesting case of epithelioma manus dorsalis in a colored woman aged sixty years, with a suggestion as to the proper treatment:

About eight months ago a wart, which had been present on the back of the right hand for a number of years, became inflamed and ulcerated from mechanical irritation, and the ulcer steadily increased in size until it assumed its present dimensions of a silver dollar. Patient has been disturbed by pain and distress, which has rendered her incapable of performing her customary duties, and which has been associated with loss of weight and impairment of her general condition.

The ulcer presents a characteristic epitheliomatous appearance. The ulceration is superficial, extending approximately to the subcutaneous connective tissue, reddish-brown in appearance, and yielding a slight seropurulent discharge. There is no cicatrization or other evidence of repair, and the borders are raised up and indurated, and show here and there a characteristic glistening pearl. The right cubital and axillary glands are slightly enlarged, due probably to septic infection, rather than direct cancerous involvement. History of syphilis is absolutely negative.

The knife in the treatment of superficial forms of cancer has proven to be decidedly inefficacious, and there is a strong reaction at the present time for the use of arsenical pastes and caustics. Arsenic seems to possess not only an elective power in attacking

chiefly the diseased pathological tissue, but also exerts a specific influence over this species of malignant growth.

In this particular case, the patient having already outlived her natural usefulness, amputation of the arm at the wrist is probably the strongest indication, and would spare her the greatest degree of suffering and insure her the most positive results.

Unna's Ointment in Ringworm of the Scalp.

In the *Post-Graduate*, xv, p. 1009, Dr. T. G. Lusk, of the New York Post-Graduate Medical School and Hospital, gives credit to Unna's ointment for the quickest results in cases of ringworm of the scalp, consisting of

Chrysarobin	5 parts.
Ichthyol	3 parts.
Salicylic acid	2 parts.
Petrolatum	to 100 parts.

The ointment is to be rubbed in, spreading of the inflammation to the conjunctiva and to the face being prevented by an oiled-silk cap to the head. A soothing ointment is to follow this strong application after two or three days.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Trauma as a Cause of Nervous Diseases.

The *Journal of the American Medical Association* of September 22, 1900, contains articles on this subject both from the standpoint of the neurologist and the surgeon, and presenting most diverse and extreme views.

Dr. Chas. W. Burr cites the history of traumatic neuroses, the publication of Erichsen's book, its scornful reception, followed later by a growing conviction that such cases as he described do occur and that the symptoms alleged "are not the invention of evil-minded neurologists."

The claim that spinal concussion is impossible because of anatomical considerations is too radical, and the claim that all symptoms may be explained by diagnosis of hysteria or neurasthenia begs the question. Fairly massive hemorrhage into the cord, with or without external injury, may occur, the symptoms depending on the extent of the hemorrhage.

Traumatic lumbago should be classed rather among affections of

the muscles. In speaking further about the purely functional effects of trauma, hysteria, and neurasthenia, Dr. Burr says: "That they may be caused by trauma is admitted by all competent to have an opinion."

From the surgeon's standpoint Dr. Burr leans to the opinion that the medical attendant is the factor most often responsible for the development and continuance of a traumatic neurosis. He takes the extreme ground that a "traumatic neurosis is a mental state, not a disease with organic lesion." The neurologist was accorded scant courtesy by Dr. Beran in being considered an efficient promoter of traumatic neurosis. The neurologists in turn were not slow, in the discussion which followed, to take Dr. Beran to task for his unwarranted position concerning the real entity of a traumatic neurosis.

Dr. J. H. Lloyd discusses the medicolegal relations, holding that there undoubtedly is change of structure underlying traumatic neurosis, and that, if this represents merely an alteration in nutrition, "it is yet a real thing and not a metaphysical obstruction."

Dr. Wharton Sinkler concludes the series with prognosis and treatment. He justly comments that as to the former, suits and prospective damages are better out of the way, and that prognosis in the hysterical cases is not so hopeful as in the neurasthenic.

As to treatment, frequent and much visiting, examining, etc., are bad, and the rest treatment with rigid exclusion of meddling friends is of distinct advantage. Hydrotherapy is also a measure of no little value.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

The Operative Treatment of Uterine Fibroids.

F. A. Lockhart (*American Journal of Surgery and Gynecology*, November, 1900) says that a uterine fibroid should not be interfered with unless it is giving rise to serious symptoms, be they mental or physical, notwithstanding the statement of one gynecologist (Gordon, of Portland) that he removes all fibroids which he meets with in practice, whether they are causing trouble or not.

Curetting is merely a palliative measure, as is also in many cases ligature of the uterine arteries.

Removal of the appendages ought to be merely a *dernier ressort*, as it practically never cures and does not always even relieve.

The operation of selection should be either total hysterectomy or myomectomy.

Myomectomy is to be chosen (*a*) where the tumor is submucous and pedunculated; (*b*) where it is subserous and either has a pedicle or its border is well defined; (*c*) where several small nodules lie immediately beneath the peritoneum.

Total hysterectomy is indicated (*a*) where the tumor is submucous and non-pedunculated, and the cervix cannot be dilated sufficiently to allow of morcellement; (*b*) where the tumor is either interstitial, large and subserous, without a pedicle, soft, fibrocystic, or undergoing degeneration; (*c*) where the tumor is complicated by diseased adnexa.

Normal Saline Transfusion in Puerperal Hemorrhage.

Maygrier (Thirteenth International Medical Congress, Paris, in *Münch. Med. Woch.*, Oct. 2, 1900) states that by means of intravenous injections of normal saline solution, about fifty per cent of those women who, by reason of incoercible postpartum hemorrhage, are threatened with impending dissolution may be saved. He reports seven successful cases out of a total of fifteen occurring in his own practice. These injections are efficient only when given in massive doses—one to two quarts of a 1:1000 solution—but should be restricted to cases in which intracellular injection has proved insufficient, or when the patient's condition becomes precarious, or again, in cases which prove very serious from the start; and should be repeated if beneficial results fail to materialize and collapse reappears. In this manner several quarts of the solution may be injected in twenty-four hours. With the usual precautions and customary technique these injections are innocuous, and Maygrier concludes that no woman should be left to succumb to puerperal hemorrhage without an attempt at saving her life by this heroic plan of treatment.

Transverse Positions and Turning in Primiparæ.

G. Vogel (*Münch. Med. Woch.*, Oct. 9, 1900, p. 141) says that transverse positions of the fetus are very rarely met with in primiparæ. Among the causes are numbered tumors, placenta previa, uterus bicornis, and scanty amniotic liquid. Among eighty-six cases of transverse position occurring at the Würzburg clinic, eight presented in primiparæ. Five of the women were affected with uterus arcuatus, one with placenta previa, and six with a flattened pelvis. As regards treatment, Vogel recommends early cephalic version by external maneuvers, and if unsuccessful combined cephalic version with perforation of the membranes. As a last resort he advises podalic version, and only in extreme cases podalic version with the hand *in utero*, provided there be no impending rupture of the uterus.

THE MEDICAL AGE

VOL. XVIII. DETROIT, DECEMBER 25, 1900. No. 24.

ORIGINAL CONTRIBUTIONS.

THE TREATMENT OF NEURASTHENIA.*

BY LEWIS R. PIERCE, M.D.

As a preface to the treatment of neurasthenia, I will briefly review the etiology of the disease. It has been aptly called a disease without a pathology. C. F. Hodges, however, describes a shrinking of the muscles and a crimping of the capsule of the nerve cells caused by fatigue, and an analogous condition existing in neurasthenia which is not relieved by ordinary rest, and may become permanent. It would seem, therefore, that we have to deal with a fatigue neurosis in which the sensations of weariness are exaggerated; eventually they become painful and are described as more or less localized aches; frequently it happens that by association they become habit pains.

For convenience of description we may divide all neurasthenias into two classes: First, those in which the neurotic inheritance is marked and the precipitating cause slight; and secondly, those in which there is no hereditary taint, but the exciting causes are in preponderance.

It is a generally accepted fact that all persons are not created with an equal amount of nervous force and ability to recuperate from energy-exhausting experiences. This is especially true of the children of neuropathic parents, and of those whose vitality is lowered by vicious habits. As a part of this inheritance early impressions are made upon the child mind by nervous, fretful, or hysterical parents. Hugh Patrick calls this a vulnerability of some part of the organism to noxious agents or exhausting influences.

The distinguishing feature of neurasthenia is a lessening in the capacity for sustaining expenditure of energy. We have seen how this may be due to a defective organization, rendering the recupera-

*Read before the Newburgh Bay Medical Society, Newburgh, N. Y., Nov. 13, 1900.

tive powers feeble. Given this predisposition, the exposure to exhausting or depressing influences necessary to precipitate an attack will be in inverse proportion to the dyscrasia already possessed. The ever-increasing responsibilities of modern methods of living and conducting business; the worry incident to the rapid accumulation of wealth; depressing surroundings; improper and insufficient food; rapid child-bearing; chronic, painful disease, especially in the pelvic organs; rapidly exhausting disease, as typhoid fever; heart lesions; the various autointoxications, lithemia, and rheumatism, are mentioned to show the wide diversity of these exciting causes. Drug habits, abuse of morphine, alcohol, and the like, lead to a persistent form of neurasthenia.

Many writers lay great stress upon an abnormal condition of the sexual system. Sigmond Frued asserts that "every case of neurasthenia has for its base some abnormal occurrence in the sexual life of the individual of the present time or since puberty." This is no doubt an extreme view. Osler is more conservative; he says: "Other causes, more subtle, yet potent, and less easily dealt with, are the worries attendant upon love affairs, religious doubts, and the sexual passion. Sexual excesses have undoubtedly been exaggerated as a cause of neurasthenia, but that they are responsible in a number of instances is certain."

Other exciting causes, almost important enough to constitute a separate class, are sudden mental or physical shock and traumatic neurasthenia. The so-called "railroad spine" is one form of this condition.

Preventive Treatment. — Great care should be exercised in the rearing of the children of neuropathic parents, especially those exhibiting nervous tendencies. Their education should be begun late, and everything should be done to develop the physical powers. The mind of the child should be made self-reliant and a process of psychic hardening instituted. A nervous, emotional mother will, at times, destroy the balance of a child's nervous energy, and it may be necessary to remove the child from her influence. Puberty is a critical time for the child with a nervous inheritance, especially for girls. If they develop emotional excitement, insomnia, or inability to fix the attention, it is always wise to remove them from school and keep them out-of-doors as much as possible. Usually the loss of a year's schooling is compensated by acquired mental vigor, and the standing in scholarship is quickly regained.

Throughout life the neuropathic individual must live within the limit of his output of energy. He is never to take liberties with his reserve energy, thinking to recoup it at leisure. Stimulants should be let alone. The hours of sleep or repose should be long. The custom which is becoming prevalent of taking a long holiday, away

from home or business, in the woods or at the seashore, will save many from nervous exhaustion. Relaxing recreation, such as golf, hunting, or riding, is to be intelligently followed. Care should be exercised that the recreation is not exhausting, thus draining lowered stock of vitality.

Treatment of the Condition.—Before considering the treatment of the nervous exhaustion, any complicating lesion existing in the relation of exciting cause must receive attention. In women, especially, do we often find some obscure disease, most frequently of the pelvic organs, which acts as a source of irritation. In this condition it becomes necessary to direct our attention to this exciting cause, but often a local inflammation cannot be controlled or advisability of surgical measures considered until the nervous tone is heightened. We have shown that the distinguishing symptom of neurasthenia is fatigue; that the lesion is analogous to tire. Rest suggests itself as the natural remedy. Disturbing symptoms should be met by temporary use of medicines, of which I will speak later.

To return to the original classification: those of the first class, the inherited neuropathics, with but slight exciting cause, need a treatment of much more nearly absolute rest than do those of the second class. The overworked neurasthenic has brought about his condition by a strain upon certain parts of his economy; and his treatment should be so planned as to give those overworked organs physiological rest. The patient must be made to understand that success will depend upon his own efforts to overcome harmful tendencies.

The plan of treatment must conform to the social and pecuniary conditions of the patient. Usually it is best to begin with a few days spent in bed, with, if possible, a trained nurse in attendance. Judicious treatments of massage, baths, and electricity, followed by light mental occupation, are in order—a modification of the rest cure, to be described later. After this preliminary rest, a change of scene may be all that is necessary to complete the cure. If practicable, an ocean voyage or a trip to the mountains or a quiet spot by the sea, or if, as is frequently the case, autointoxication be present, a few weeks spent at some springs may restore mental and physical vigor. A period in one of the sanatoria where hydrotherapy is carried out is often to be recommended.

The diet should be regulated; it is well to begin with a milk diet and gradually add solid food as the appetite and digestion improve. It is always necessary to instruct the patient as to the amount of water to be taken. Elimination is always faulty in these cases. Constipation is the rule; from four to six pints of water taken daily will correct this tendency.

Hydrotherapy, especially the hot pack, is of value. Salt baths

are useful if there is a relaxed condition of the skin or general flabbiness of the tissues. The alcohol bath is always grateful. No doubt much of the success of sanatorium treatment of neurasthenia is due to the varied system of hydrotherapy at command.

As improvement progresses the amount of recreation may be increased, with reading, correspondence, and games, followed by short walks or drives, and soon to vigorous exercise.

The following are a few special symptoms requiring attention:

Pain.—This is usually neuralgic in character, frequently localized, and by its relief affords a good indication of the success of our treatment. It often yields to counter-irritation, a fly-blister, or the thermocautery. Usually some analgesic must be employed. Phenacetine or antipyrin gives prompt relief. If an opiate must be used codeine is the preferable form. Electric massage may be given in the following manner: One pole of a faradic battery is placed under the patient's back, the other is grasped by the nurse with one hand, while with the free hand she rapidly kneads all the accessible muscles and soft tissues. This is very soothing to the sensory nerves which are playing false.

Insomnia.—For this the hot pack at bedtime will bring relief in the majority of cases. The soothing electric massage is also in order. At first a hypnotic may be needed. Brandy taken hot is generally sufficient, but this failing, the newer product chloretone seems to meet all requirements. I do not give bromide, chloral, or sulphonal, because of the mental depression following their use.

Tachycardia.—Palpitation is frequently distressing to the patient, both because he is conscious of his heart's action and because he considers it an indication of heart disease. For this the iodides are useful. The strontium salt does not disturb the appetite or digestion as do the other combinations of iodide. The direct heart tonics are often disappointing, but strophanthus in small doses is sometimes useful. I would emphasize the statement made by Schott that the heart in neurasthenia is often dilated, and sometimes permanently so.

Dyspepsia.—This symptom is best met by giving small meals at frequent intervals, beginning with a liquid diet. Overfeeding is to be guarded against. Strychnine should be used only in minute doses, as a stomachic. Neurasthenics seem to possess a tolerance to strychnine, often taking massive doses with no inconvenience. An occasional dose of calomel does more for the digestion than any other remedy; the patient is always brighter after its use. Bismuth may be given regularly to allay the pain. Peptone, combined with iron, manganese, and arsenic, increases metabolism, and its use is soon followed by a cry of the tissues for more food.

Psychosis.—I will mention but two remedies for the anxiety and

fear often experienced. Sumbul and codeia, at times allay these symptoms promptly; this failing, recourse to opium is necessary.

Difficulty is often experienced in releasing the patients from treatment. One after another the different elements of treatment are to be made less frequent, and finally discontinued as strength and self-reliance become established. No time limit can be fixed. The return to the usual conditions of life must be gradual, and is often accompanied by one or two relapses. These are not altogether lost, as they serve a purpose in reminding the patient of his limited stock of vitality. Many neurasthenics will find it necessary to readjust their lives to their limited output of energy. Finally, if the case is a severe one, with inherited nervous bankruptcy, all our resources of treatment will be taxed, and we must give our patient the benefit of physiological rest as nearly absolute as it is possible to make it.

The method of treatment elaborated by S. Weir Mitchell, and known by his name, offers a fixed plan, which is of prime importance. The ability of the nurse now becomes an item for consideration. She should be cheerful and companionable, able to entertain, and capable of controlling the wishes and actions of her patient. It is not enough to tell the nurse that the patient must have rest; every hour of the day must be provided for in a prearranged programme. Isolation from friends and family now become a necessity. The patient should be told definitely that from four to six weeks is to be spent in bed. He should not leave the bed for any purpose. In extreme cases he is not allowed to turn in bed without assistance, or allowed to feed himself. The close confinement is at first very irksome, but the new surroundings, strange nurse, and curiosity to learn just what to expect, help to relieve the tedium. Usually three or four days finds the patient relaxed, comfortable, and submissive. The facility with which this is accomplished is, at times, remarkable.

During these first days a thorough examination should be made, and the régime for each day laid out. With forced rest we combine forced feeding, and artificial exercise by means of massage, electricity, and Swedish movements, the latter to preserve the suppleness of the joints and prevent wasting of the muscles, with just sufficient mental recreation to drive away *ennui*.

Upon the management of the diet will success of treatment often depend. The neurasthenic is almost of necessity suffering from the train of symptoms known as nervous dyspepsia. Frequently he objects to milk, in which case it becomes necessary in some way to modify the milk, either by the addition of some diluent, as weak tea, or carbonated water, peptonized milk, kumiss, or buttermilk; flavoring the milk with a few drops of vanilla or a few grains of chocolate does

nicely, or it may be sweetened and frozen. Kumiss to be useful should be fresh, not over four days old, and should be made by the nurse.

Many patients do best upon a milk diet for about a month, taking a definite quantity at definite periods. It is sometimes possible for a gallon to be taken from seven o'clock in the morning to nine at night. Often a little solid food may be allowed after the first few days, beginning with a slice of bread and adding the more easily digested articles of food, until a full meal is taken three times daily.

The passive exercise should be divided into three periods — one during the morning, one during the afternoon, and one, preferably the electricity, before retiring. The nurse should be a skilled masseuse. No special school has special virtues. A firm kneading of the muscles between the fingers and heel of the hand, without friction of the skin, will accomplish all that is possible. During the morning treatment the faradic current may be used for any painful conditions. For at least a week before the patient is to get up, resistance motions should be made at one treatment.

With treatment well established and the several symptoms abating, there should be a decided improvement in color. The skin should respond readily to the stimulus of massage, and a blood analysis should show an increase in the hemoglobin. The limbs should become firm and the face lose the characteristic expression, and take on the appearance of a younger person. Above all the increase in bodily weight should be considerable.

When recovery seems well under way, we allow the patient to make a little effort; to have extra pillows for short periods, to sit up once or twice daily, and gradually to lengthen the time spent out of bed; then to walking about the room and seeing a few callers. Notwithstanding the care used, when the patient makes the first attempt to stand he finds his limbs will not sustain his weight. Massage should now be replaced by calisthenics. As soon as the patient is able to sit up for several hours and ride out, he may be sent to the seashore or mountains for a short trip, away from the surveillance of the nurse. Cautiously old associations may be resumed, but overexertion must be guarded against for a long time. A return to the old habits of life, and often dissipation and overwork, are dangerous to the future welfare.

One great advantage of the rest cure is that it places the individual, often for the first time, under regular discipline which leaves its impression upon his future life habits. Fortunately this plan of treatment can be modified to suit the peculiarities of individuals or exigencies of surroundings.

In closing I would emphasize two facts as important to success: First, treatment must be individualized to meet the requirements of the patient; and secondly, it is necessary to give close attention to details.

THE UNION OF THE TWO DIASTATIC RECTI ABDOMINALES IN A SINGLE SHEATH FOR VISCERAL PTOSIS.

BY ORVILLE W. MACKELLAR, M.D., CHICAGO.

In June, 1895, Mrs. A—— came to me complaining of bearing-down pains and dragging sensations, also vesical tenseness. She had discovered that she had a tumor which she could move about the abdomen. Upon examination of the stomach by inflation with air and gyroscope I found a marked gastroptosis. There was also nephroptosis of the right kidney. The recti abdominales showed distinct and marked diastasis. The tumor, the size of a cocoanut, moved about the abdomen so freely that it was occasionally lost to palpation by gliding under the costal arches. The tumor could be forced so that it projected prominently between the separated recti muscles. The separation of the muscles was so great that one could feel almost every abdominal viscus plainly through the thin abdominal wall. She was pregnant perhaps four months; when she coughed or produced excessive intra-abdominal pressure, the abdominal organs protruded markedly between the separated recti muscles. It was a typical marked case of severe visceral ptosis and relaxed abdominal walls with diastasis of the musculi recti abdominales. She was a poor woman and needed some distinct aid. I consulted Dr. Byron Robinson, who had been making careful study of visceral ptosis. The result was that an operation was proposed to her, which she accepted, and it was performed in the Woman's Charity Hospital in May, 1895, by Dr. Byron Robinson and myself.

The operation consisted in splitting the sheaths of the recti muscles on the anterior surface, after which the two recti muscles were united into one sheath by suturing the sheath on the posterior and anterior side of the two enclosed muscles. The patient made a good recovery. She was delivered of her child without any separation of the recti muscles. I have a distinct record of her for the past five years. She is well at present. The union of the diastatic recti muscles into a single sheath has practically cured the visceral ptosis. Since this operation was performed five years ago, and is still a perfect success, it can be recommended as a practical procedure for visceral ptosis. This same operation has proved successful in other cases.

MUSICAL MURMURS OF THE HEART.

BY I. W. TRENT, M.D., MUNCIE, IND.

I was led to take a special interest in musical murmurs of the heart by having a case of particularly loud murmur under my care for about a year, and then being permitted to examine the heart post mortem and see the lesion that caused this peculiar murmur in this particular case. When I concluded to report the case my first idea was to look up the literature on the subject and learn the theories advanced by the different writers as to the cause of musical murmurs, then destroy the false theories, if there were any, by showing the facts in the way of a specimen. But when I came to investigate, I found the literature on the subject so meager, and the theories advanced so few, that they were hardly worth considering, so after reviewing the little I did find on the subject, I simply reported the case and presented the specimen. I found by referring to the *Index Medicus* that a great many papers, and judging from their titles exhaustive ones, have been written on the subject, but they are mostly in English journals, to which I had not access.

Osler says: "In childhood, loud, rough, musical heart murmurs with normal or only slight increase in the heart dulness occur only in congenital heart disease. In aortic stenosis the murmur often has a much harsher quality, is louder, and more frequently musical than in other conditions named. In mitral incompetency the murmur is blowing and sometimes musical in character, particularly toward the latter part."

Tyson says: "A musical murmur is sometimes heard in connection with mitral insufficiency or aortic stenosis."

Albert Abrams, in his book on Clinical Diagnosis, says: "Murmurs of a musical character are sometimes heard and owe their origin as a rule to the vibrations of a membranous substance suspended in the blood-stream."

Loomis and Thompson say: "The murmur of aortic incompetency is frequently musical in character. Also in mitral insufficiency the murmur sometimes becomes musical in character."

From a Belgian journal I found a quotation as follows: "As to the musical noises which originate in the cavities of the heart, the writer considers as problematical their production by an abnormal arrangement of the tendons; and that they are dependent upon perforation of the arterial valves, or upon excrescences which transform the open-

ings into simple slits like the openings of a flute on the smooth surface."

Loomis says: "A mitral obstructive murmur is never soft nor musical." He also says: "The vibration of an irregular chorda tendina stretched across the aortic orifice, its extremities being inserted into opposite walls of the ventricles, may produce a systolic musical murmur."

Flint, in his Diseases of the Heart, is the fullest and most satisfactory of any I found. He says: "Murmurs sometimes have a musical intonation. The sounds are compared to the sibilant râle, the cooing of a dove, the whining of a puppy. These are as much less frequent than the rough murmurs as the latter are more frequent than the soft murmurs. They are interesting only as clinical curiosities; they have no special pathological or diagnostic significance except that they denote the existence of organic disease. They are preceded by and may give place to the common bellows murmur. They may alternate with the latter in different conditions of the heart's action." As remarked by Bouilland and Hope, "it is as intelligible that a bellows murmur may be transformed into a musical tone as that a change in the disposition of the lips changes a blowing into a whistling sound."

This is all I have been able to find on the subject, but it goes to show that authors believe—that is, those authors that believe about it at all—that more than one lesion may cause this murmur, and that when it is present it is of no special significance, but is interesting as a rare clinical curiosity.

The Case.—On October 6, 1899, I presented two cases of heart trouble to our county society. One was a case of transposition of the organs, the liver being on the left side and the heart on the right side of the body. The other was presented because of the loud musical murmur that was to be heard. The latter case was that of Mr. G. A——, aged sixty-three. Those of our members who listened to the heart distinguished a loud musical murmur most nearly resembling the cooing of a dove, which was heard all about the cardiac region, with probably its greatest intensity at about mid-sternum, on a level with the third costal cartilage. I had had the patient under observation for about a year, and never examined him that I did not find this sound present, so that I believe it was a continuing sound and not intermittent, as musical sounds are sometimes said to be. The patient himself could hear the sound, but said it never bothered him except at night, when, on lying down and everything being still, the noise would be so loud as to keep him awake, and other members of the family would speak of being molested by it. When things were still,

the sound of the heart could be made out, and especially was the absence of the second sound noticed. I would call attention to this point in connection with the specimen.

As stated above, he was presented to our society on October 6, 1899, and on the evening of November 27, 1899, he went to the commons to bring home his cow, but failed to return. Next morning he was found somewhere near where the cow had been tied, lying on his face, dead. The cow had been tied by a chain five or six feet long, to which was attached a long rope. This rope he held in his hand nicely coiled when he was found, and it is reasonable to suppose that he had loosened the cow, coiled the rope, and started to lead her home by the chain, when she, being cold and anxious to get home, started on a run, dragging the man with her at a lively clip, which proved too much for his crippled heart, and he succumbed. Next day, through the kindness of the coroner, I was permitted to assist in making a post-mortem examination at the morgue. Every organ was found normal and in a healthy condition, except the liver and the heart. We thought it important in our report to mention that the appendix was present, and normal and healthy. I never saw a nicer one. In these days of appendiceal craze, I believe at every opportunity we should examine and make a note of the condition of the appendix, for there are some who believe that the appendix is diseased or abnormal in every case, or of right should be.

On the convex surface of the right lobe of the liver was found an isolated, solitary nodule about the size of a hulled walnut, which we took from appearances to be tubercular. There was an ulcerative process going on between this nodule and the liver proper, while otherwise the liver was healthy.

The pericardium was normal in size and appearance, and contained the ordinary amount of fluid. The heart itself was removed, and to external appearances was healthy. It was normal in size, a fact which afterward surprised us when we found the diseased valves. Right auricle was normal. Right ventricle was normal in size and thickness of walls. The tricuspid valves were normal, except the segment next to the interventricular wall, which was somewhat hardened, contracted, and shriveled at and near its attachment to the heart wall. This segment was only separated from the aortic valves by the thin septum that divides the heart, and seemed to have been affected by the continuation of the inflammation that so badly affected the aortic valves. While this segment was thus slightly crippled, it was still able to reach well across the auriculo-ventricular opening, and was met by the other two segments in a way that prevented regurgitation.

The left auricle was healthful and normal. The left ventricle was

normal; its cavity was not enlarged, nor were its walls thickened. The mitral valves were absolutely perfect, and lay flat and snug against the walls, or when the ventricle was distended would close the opening perfectly.

The aortic semilunar valves bore no resemblance to valves. They were shrunken, shriveled, contracted, hardened, calcareous, and connected to each other in such a way that only a slit-like opening remained. They could be nothing but an impediment to the onward flow of the blood, and would only to a limited extent prevent its backward flow. We are taught that the lesion at the aortic valves is caused partly by endarteritis and partly by endocarditis. In this case it seems to have been valvulitis pure and simple, as there was no evidence that either the artery or the lining of the heart had even been affected. Had I known what I was to find, or had I thought of preserving a specimen at the beginning of the examination of the heart, I should have saved more of it and made a more complete specimen. I examined the heart in the usual way, beginning at the right auricle, and destroyed the parts for the purposes of examination as I came to them.

In the specimen one of the segments of the mitral valve is left, and it may be seen how perfectly normal in appearance it is, how free from thickening or hardening of any kind, and how completely and nicely it closes the entrance to the aorta, and like a valve, as it is, prevents the blood from flowing into the aorta during diastole.

In this specimen we no doubt have the cause of the murmur and also the cause of death. The way in which a sound like the cooing of a dove could be produced by the flowing of a stream of blood through the opening between these diseased valves, while they themselves must have been continually submerged in blood, I cannot explain. The cause of death is better set forth by Tyson than I can give, so I quote him. He says: "This is the form of valvular disease in which sudden deaths are most frequent. It has overtaken many a victim in the course of his daily vocation, and without warning, though it is most apt to be invited by some slight overexertion or mental exitement. The cause of sudden death is interruption of the circulation in the coronary arteries. This may be brought about in one of two ways: (1) These arteries, in common with others, are especially prone to endarteritis, and resulting sclerosis, and atheroma, a condition which constantly invites thrombosis and obstruction to the circulation. (2) It may be due to embarrassed circulation in these vessels caused by aortic regurgitation. For even if the blood enters the coronary arteries during systole, it must still receive in health some further

supply in the recoil of the blood on the closed semilunar valves, which cannot take place when the valves are incompetent."

Tyson intimates or suggests that blood enters the coronary arteries during systole. To this idea I must dissent and say that during health the blood cannot enter the coronary artery during systole, for at this time the semilunar valves lie flat against the aortic arterial walls and effectually close the entrance to these coronary arteries. Then as it is only during diastole, when the valves close and the recoil of the aorta fills the sinuses of Valsalva, that the coronary arteries can fill themselves, we can see the great interruption of the circulation in the heart, when the pressure of the recoil is almost destroyed by the regurgitation into the left ventricle. Another point—the semilunar valves when healthy lie against the openings into the coronary arteries, which have no valves within themselves, and prevent the blood from being forced backward into the general circulation from the heart muscle while the heart is squeezing itself during systole. Then when the valves are diseased and destroyed so far as ordinary functions are concerned, as they are in this case, they cannot close the openings into the coronary arteries, and thus they allow the blood to churn backward and forward in these arteries, while at the same time the amount of blood that enters them at all is very much lessened because of the lessened force of the recoil in consequence of the regurgitation.

In this case there was no second sound of the heart because there was no perfect closure of the aortic valves. The pulmonary valves were intact and healthy, but the recoil in the pulmonary artery was not sufficient to snap these valves shut with enough force to cause a sound. Hence I am ready to say that the second sound of the heart is caused by the closure of the aortic semilunar valves, and not say, as most writers do, "by closure of the semilunar valves," including the pulmonary, for I do not think these latter have anything to do with it.

The specimen shows the aortic semilunar valves, a portion of the aorta, a section of the coronary artery, one segment of the mitral valve, and a small amount of the wall of the left ventricle.

The point of most interest to me is how the left ventricle could work as hard as it must necessarily have done to force the blood through this narrow slit with enough force to cause so loud a murmur, and for so long a time, and not hypertrophy.

In studying this case and the literature on the subject, I am convinced that musical murmurs of the heart are only freaks, and are only important because they denote some serious organic lesion, and are only interesting because of their rarity.

HYPERCHLORHYDRIA.

BY ALOIS B. GRAHAM, A.M., M.D., INDIANAPOLIS, IND.

When our bodies are in perfect health and the food supplied to them is normal, both in quantity and quality, we do not know that we have a stomach—the process of digestion is effected unconsciously. But when pain and other disagreeable sensations are experienced during the digestive period—this pain or these disagreeable sensations being either in the region of the stomach or in some other organ of the body; or when the function of any organ is perverted or disturbed and we can trace a connection between such disturbance and the digestive process—then we are said to be suffering from indigestion.

It is not so many years since it was considered sufficient to make a diagnosis of indigestion. When the physician had done this, excluding cancer, ulcer, acute gastritis, and perhaps stricture of the pylorus, he flattered himself that he had done all that was expected of him for his patient. He then would prescribe for a condition of the exact nature of which he was painfully ignorant. However, with the small amount of knowledge which was the common property of the profession, this was all that could be done.

But the work of recent years and the discovery of improved methods have placed our knowledge of diseases of the stomach upon such a footing that the physician of to-day has not any more right to make a diagnosis of indigestion, and end there, than he has to make one of dropsy, headache, or cough. It is very convenient for the practitioner to have a term by which he can intimate that the act of digestion is accompanied by symptoms, without committing himself to any theory of their causation.

Having given not a little time to the study and investigation of diseases of the digestive system, I am thoroughly convinced of the necessity, as well as the importance, of making a correct diagnosis of these diseases. Not until we have made a correct diagnosis can we hope for or expect to establish a successful therapy.

There are certain diseases of the stomach which are very seldom diagnosed accurately — not that the diagnosis is difficult, but the majority of physicians will not take the time to make the necessary investigations. Believing that a discussion of one of these diseases will prove of interest, I have been prompted, by a personal observation of cases seen in my own practice, to present for consideration a disease associated with an increased hydrochloric acid secretion, and one upon which the greater part of all acutely painful indigestions depend.

Hyperchlorhydria is of the greatest importance, first, on account of the frequency with which it is met in practice, forming as it does nearly one-fourth of the cases generally confounded together under the head of indigestion; and secondly, because we are indebted for the power of differentiating it with certainty to the methods, recently devised, of chemically analyzing the stomach contents.

The term hyperchlorhydria is the correct one, as it in itself implies that the gastric juice is in excess and that the increased acidity is due to hydrochloric acid. It must not be confounded with the super- or hyperacidity associated with fermentative processes, in which the acidity is due to the presence of organic acids. In hyperchlorhydria, the secretion preserves the periodicity of health — that is to say, it is produced only during the digestive periods, and ceases in the intervals that elapse between them. This enables us to distinguish it from chronic hypersecretion or chronic gastrosuccorrhea, in which disease the gastric secretion is continuous.

Boas, Ewald, and Hemmeter class hyperchlorhydria among the neuroses of gastric secretion. Some authorities deny the existence of a persistent disorder of secretion, which is not produced by an anatomical lesion of the gastric mucosa. Most authors consider all dynamic affections of secretion to be neuroses. Van Valzah and Nisbet, in their work, state that prolonged study and careful investigation have led them, irresistibly, to the conclusion that the disorders of gastric secretion are not always due to an alteration in the gastric mucosa, nor to a neurosis of the vagosympathetic system.

Herschell says: "The physician who classes hyperchlorhydria among the neuroses is only partially right. It must be admitted that some cases are pure neuroses. But in every-day practice we meet with a number of other cases, in which the only nerve disorder that can be surmised is a hyperirritability of the nerves controlling the secreting glands of the stomach. The effect of this is that the slight stimuli, which would prove harmless to a normal stomach, produce an excessive gastric secretion."

Personally, while classing all cases of hyperchlorhydria among the neuroses, yet I would go further, and from an etiological standpoint divide them into two groups:

1. Primary hyperchlorhydria, or those cases in which the cause is some direct local irritant, which produces a hyperirritability of the nerves.

2. Secondary hyperchlorhydria, or those cases in which, as its name implies, the symptoms are secondary to a disturbance or lesion in any other part of the body. A hyperchlorhydria of this class could be due to some systemic intoxication, some morbid constitutional state; or it might possibly be caused by disease in any organ in the body.

Etiology.—The fundamental causes of hyperchlorhydria being as yet unknown, I must necessarily confine my remarks to the knowledge of a few predisposing causes. In the majority of cases its origin may be traced to a psychical cause. We can obtain a previous history of excessive brain work, grief, worry, deprivation of sleep, or a very excitable disposition.

Jaworski found it very frequently in the excitable Jewish population of Galicia. Jolly noticed it in hysterical patients. Von Moorden found it in melancholic subjects, and also as a frequent companion of neurasthenia. Moral and mental causes play an important part. "Cerebral fatigue may mask a beginning hyperchlorhydria, and illustrate the close relation existing between the brain and the abdominal sympathetic, a point upon which Lever has laid so much stress." It is thus at first obviously a neurosis.

Riegel says that local causes seem to play an important rôle in the etiology of this disease, and calls our attention to its frequent occurrence in certain districts.

Both nephrolithiasis and cholelithiasis are causative factors. This is proven by the rapid disappearance of all gastric symptoms dependent upon an excessive hydrochloric acid secretion, after the passage of the calculi into the intestines and bladder respectively.

In a few cases the disease appears to be a result of prolonged and excessive stimulation of the gastric mucosa—as from the abuse of alcohol, drugs, excess in food, highly spiced dishes, ices, imperfect mastication, and the bolting of food. "It is equally met with among the rich, when they eat too fast and do not masticate their food properly, and among the poor, who are compelled by circumstances over which they have no control to live on aliments of a coarse and indigestible quality." It is said that a diet rich in proteids predisposes to hyperchlorhydria.

Clinical History.—The symptoms may develop either suddenly or gradually. If suddenly, the patient is seized with a sharp pain, and from that moment continues to suffer more or less at his principal meals. If gradually, at first merely a sense of uneasiness is experiencd after taking food, but this slowly increases in intensity, until after a longer or shorter time actual pain is present. The most characteristic symptom of a typical, well-developed case of hyperchlorhydria is the pain. It comes on two, three, or four hours after a meal, and in severe cases may come on every day or even after every meal. The duration of the attack varies from a few minutes to some hours, but it is usually constant in the same individual. It seldom lasts until the next meal, and in mild cases will disappear in a short time if food be taken; or the attack terminates with the regurgitation of a few mouthfuls of a hot, acid liquid which sets the teeth on edge.

The pain may be of a severe, lancinating, constrictive character, or the patient will sometimes describe it as a boring, burning, gnawing sensation. It is a real pain, frequently designated as "cramps," and must not be confounded with the uneasy sensations associated with chronic mucous gastritis and cancer. Its position is in the epigastrium and left inframammary region, but in some cases it is felt to the right of the middle line in the position of the gall-bladder.

The pain being due to an irritation of the gastric mucosa, produced by an excessive hydrochloric acid secretion, it is easy to understand why it has its time relation to the taking of food. At the height of digestion the symptoms are, as a rule, most severe. During the first period of digestion the hydrochloric acid, as it is secreted, is taken up and held in combination by the food. It is only after the food (proteids in general) has become satiated that free hydrochloric acid can be present in the stomach. It is at this time, the height of digestion, that we can detect an excessive acid secretion, and it is during this period of digestion that this pain is most severe.

The pain may be intensified by spasms of the muscular sphincter of the pylorus. Patients tell us that the period before breakfast is their best time in the whole day. At this time, the stomach being empty, free hydrochloric acid is absent, and as a result they are free from pain.

As a rule, there is a slight tenderness on pressure, especially over the region of the pylorus. No dilatation is to be detected. Splashing sounds are absent in the empty stomach, and cannot be obtained beyond the normal limits. Emaciation is slight or absent, and thus contrasts with the condition seen in permanent hypersecretion where sooner or later it is the rule.

Nausea, belching, and vomiting of very sour masses may accompany hyperchlorhydria. While belching may give temporary relief, copious vomiting usually brings greater and more lasting relief. The tongue is clean and moist and never furred, as in chronic catarrhal gastritis. Flatulency is not the rule. This is surprising, since with an excessive hydrochloric acid secretion we should not expect to find any abnormal fermentations.

In most cases the appetite is very good. This we should expect, for the patient not only digests his food quicker than normal and soon becomes hungry again, but he has inducement to eat in the knowledge that his pain will be relieved by taking food. However, in some cases there is complete anorexia, the patient knowing that so long as his stomach is empty he will be comparatively free from pain. Thirst is increased, the ingestion of fluids relieving the pain by diluting the highly acid stomach contents.

I have endeavored to describe the symptoms which are seen in a typical case of hyperchlorhydria. I have not considered the effects of advanced cases of this disease upon the motor activity of the stomach. It will suffice to say that the oft-recurring cramp of the pylorus will in time cause a retardation of the passage of stomach contents into the intestines. The result is an atony, and in all probability a chronic dilatation.

Diagnosis.—It is by the use of the stomach-tube, and by it only, that we are able to make an absolute diagnosis. But a diagnosis made by this means is unassailable. We examine the stomach under three conditions: First, in the morning before breakfast when the stomach is empty; secondly, two hours after a test meal consisting of bread, minced meat, and water; thirdly, six or seven hours after a meal.

Before breakfast, in a case of hyperchlorhydria, we should find the stomach virtually empty. If we can aspirate any fluid, it should not contain any alimentary débris, pepsin, or hydrochloric acid. This will prove that there is not any abnormal retention of food, and that the secretion of gastric juice takes place only during the periods of digestion. By this one procedure we can exclude permanent hypersecretion.

Introducing the tube and expressing the stomach contents, two hours after the test meal has been taken, enables us to obtain a filtrate containing an excess of free hydrochloric acid, and one which will dissolve a morsel of fibrin or a hard-boiled white of egg with greater rapidity than the filtrate obtained from contents which have been aspirated from a normal functionating stomach.

We introduce the tube six or seven hours after a meal. This will inform us as to the motor condition of the stomach walls. At this time the stomach should be empty. If this is not the case, it is evident that there must be a certain degree of atony of the coats of the stomach.

Having examined the stomach under these three conditions, and believing our patient to be suffering from hyperchlorhydria, we can make our diagnosis absolute by a further employment of the stomach-tube. At bedtime, by means of lavage, the stomach is thoroughly cleansed. The next morning, before anything has been taken, either to eat or drink, the tube is introduced and the contents of the stomach, if any, aspirated and examined. If we find the stomach empty, the case must of necessity be one of hyperchlorhydria. But if we can procure some fluid containing hydrochloric acid, and possessing the power of dissolving albumin, our patient is evidently suffering from one of the forms of hypersecretion.

While the diagnosis of hyperchlorhydria is easily made, yet I do not wish to be understood as saying that it is always an easy matter to determine the cause of this disease. Within the past three months I have had under my observation two cases in which the diagnosis was easily made. In both instances a diagnosis of secondary hyperchlorhydria was made. But I was unable to detect the cause. As a result my treatment was only palliative, and the relief afforded these two patients was only temporary and of very brief duration.

Prognosis.—If the disease is of recent origin and it is possible to detect and remove the predisposing cause, the prognosis is good. In older cases the results are not at all encouraging. Personally, I would give an unfavorable prognosis, although Hemmeter states that permanent relief may follow persistent treatment, even in chronic cases. Where the hyperchlorhydria is symptomatic, or, as I have termed it, a secondary hyperchlorhydria, the prognosis will depend upon our skill as diagnosticians in detecting and removing the primary causes.

Treatment.—We cannot follow any one rule in the treatment of this disease. Its causes are many, and until we have determined the predisposing cause, and not until then, we cannot expect to establish anything approaching a rational treatment of hyperchlorhydria.

Again, we must decide as to whether our patient is suffering from a primary or a secondary hyperchlorhydria. If the former, local treatment will in all probability be followed by permanent relief. If it is a secondary hyperchlorhydria due to a chole- or nephrolithiasis, a melancholia, a neurasthenia, etc., we must treat these conditions accordingly. The relief or removal of the predisposing cause will be followed by a rapid disappearance of the secondary gastric symptoms.

Authorities lay much stress upon the selection of a proper diet in the treatment of this disease. Two systems of dietetic treatment have been devised. One favors the use of an amylaceous diet and a restriction of proteids, because it is claimed the latter are powerful stimulants to hydrochloric acid secretion. The advocates of the other system argue that the symptoms are a result of an irritation of the nerves by hydrochloric acid. Therefore, such foods must be chosen which combine with the greatest quantity of this acid. They use a diet consisting of meats and vegetables especially rich in albumin. In some cases—although I believe they were typical cases of primary hyperchlorhydria—I have obtained some very satisfactory results by giving attention to the diet. But in the cases in which a diagnosis of secondary hyperchlorhydria was made, I am unable to report any flattering results from dietetic treatment.

Sorensen and Metzger speak of the great difference of opinion

concerning the proper diet to be used in cases of hyperchlorhydria. They have made a number of studies using three forms of diet, one of which was composed chiefly of carbohydrates, another of albumins, and a third was a mixture of these—the caloric value in all cases being about the same.

With a mixed diet free hydrochloric acid appeared in from one-half to two and a half hours after eating, and its maximum was attained in from one-half to three hours subsequent to its appearance. When the diet was almost exclusively carbohydrate, free hydrochloric acid appeared still earlier and the maximum was reached more rapidly. On the albuminous diet free hydrochloric acid was discovered in from one to two hours and its maximum was reached in four hours. There was no greater secretion when albumins were used, and the amount found was the same as when carbohydrates were taken. Therefore, the actual effect upon secretion of these three diets was about the same. However, the smaller volume of the albuminous diet and its more rapid passage from the stomach make it valuable, and experience has taught us that large quantities of albumin are usually well borne in hyperchlorhydria. But man cannot live on an exclusively proteid diet. So that a mixed diet really becomes necessary, though the amount of carbohydrates should be somewhat limited because they must be given in large quantities and are likely to be retained in the stomach; consequently they will act as an irritant to the stomach.

Even in the treatment of primary hyperchlorhydria we cannot outline a treatment which is applicable to all cases. In some cases I have obtained good results by insisting on absolute rest. I have my patient abstain from all food for at least one and sometimes as many as six days, at the same time using nutritive enemas. Following the plan of Spivak, I place poultices over the epigastrium both for the comfort they give and in order that they may act as a splint for the stomach.

Einhorn especially favors the internal galvanization of the stomach, claiming successful results. Heidenhain claims it has a calming effect upon the irritated nerves. He introduces the anode with the intragastric electrode into the stomach filled with a moderate quantity of warm water, and applies the cathode to the sternum, epigastrium, or spine. So far my success with galvanization as well as faradization has been *nil.*

We have diagnosed a hyperchlorhydria, but we are unable to determine the predisposing cause. What can be done for our patient? We cannot stand around, look wise, and allow him to suffer. We must in some way combat the effects of the excessive hydrochloric acid secre-

tion. How shall we do this? Personally, I would condemn the use of morphine, since experience has taught me that the after-effects from this drug are worse and more lasting than the disease we are treating. However, in an emergency call, with no other suitable remedy at hand, I have been compelled to resort to the use of morphine. Cocaine is not suitable because its effects pass away too rapidly. The same may be said of orthoform, with which I have experimented. My own experience with atropine has not been favorable, having given it in one one-hundredth grain doses three times a day.

The administration of alkalies will give relief in many cases, but as a rule it is only of short duration. As soon as they become neutralized the pain will recur.

The use of the stomach-tube combined with alkaline solutions has afforded me better and more lasting results than any other treatment. With the very stubborn cramp-like pains, ever present, there is not anything to be done except to remove the strongly acid stomach contents.

By means of lavage the stomach is thoroughly cleansed with a solution of bicarbonate of soda. When the water returns clear—that is, after all food has been removed from the stomach—a one-per-cent solution of magnesia usta is introduced. Having allowed this to run out, we then introduce a one-per-cent solution of tannin. The latter solution may in some cases act as an irritant to the stomach; we can in its place substitute a suspension of bismuth subnitrate, and if the pains are very severe, to this can be added bismuth subgallate.

In conclusion, I wish to state that in presenting this subject I have endeavored to bring out three points, namely:

1. The frequency which the disease hyperchlorhydria is met with in practice.

2. Its easy diagnosis by the use of the stomach-tube.

3. The importance of determining whether we have a primary or secondary hyperchlorhydria, and directing our treatment toward the removal of the predisposing cause.

THE MEDICAL AGE.

A Semi-Monthly Journal of Medicine.

EDITED BY FREDERICK W. MANN, M.D.

All communications regarding papers, reports, etc., should be addressed to the Editor of THE MEDICAL AGE, P. O. Box 484, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the Publisher, William M. Warren, Box 484, Detroit, Mich.

EDITORIAL ARTICLES.

MENTAL SANITATION.

The manner in which the public has been taken into medical confidence in the matter of tuberculosis has resulted in a wide-spread knowledge of the subject, which has had a decided effect in modifying the general morbidity of the disease. In an admirable paper contributed by Dr. R. W. B. Smith to the *Canadian Journal of Medicine*, the writer contends that the time is approaching when a similar method of popular edification is to take place in regard to insanity.

Among other things, the writer contends that the public should be enlightened in regard to insanity that they may properly estimate the potent factor of heredity. A morbid disposition is insidious in its development, and therefore should receive early attention and control.

A recognition of the variability of individuals for bearing strains and burdens is one of the first necessities if extensive nerve breakdown is to be avoided. The imposition of these burdens beyond the capability of the individual causes many cases of insanity to develop. The knowledge of a few facts of this kind might with advantage be taught in the public schools. If the prevention of insanity is to be brought about, it will not be by the study of mental disease so much as by the enlightenment of public sentiment, and the establishment of the correct principles of mental sanitation.

Another most important factor in the prevention of insanity consists in a proper study of child-character. A careful consideration of the development of mental phenomena during the period of growth in a child would often be the means of adjusting the mental burden to the capacity of the bearer, and so to avoid the defection which must follow from overstrain.

The prevention of insanity becomes a problem of individual mental sanitation, and the sooner this is realized by the general public, the sooner will the happy result be attained.

EDITORIAL NOTES.

Subliminal Consciousness.

The following instance of secondary consciousness is recorded by a contemporary: A student who had been reading hard for examination suddenly left his home. He was in easy circumstances, and his family, much alarmed, sought the aid of the police. Nothing was heard of the absentee until five days after he was missed, when information came to hand that he had given himself up to the police with the following story: He had suddenly found himself walking about in the streets five days before, and did not know who he was nor where he was, nor could he remember anything in regard to his past. He had spent the five days wandering about in a vain attempt to recall memories of the past, and kept a careful diary of what he did from day to day. On thinking his case over, it occurred to him to find out if his family had advertised for him, and on making inquiries at the police station, by looking up the more recent advertisements, it was discovered that his parents had tried this means of finding him. He was accordingly returned to his family, and though he was unable to recognize his relatives, he placed himself under medical care, and in the course of about seven days his memory for the past commenced to return.

The full consideration of cases of this kind is still far from complete. They offer a fruitful field for research by our psychical research societies.

The Fragrant Weed.

Some army officer should give us his frank views on the value of tobacco in time of war. In the South African campaign, the value of tobacco was so highly realized that a tobacco famine was more dreaded than a failure of any other kind of supply. The use of tobacco seems to exert a distinct and valuable influence on bodily comfort, so much so that an extraordinary price was paid for the weed during the siege of Ladysmith. It is suggested that it allays muscular irritability by some resolving power on the ptomaines of fatigue. The enemies of the army canteen must surely pause before they engage in an antitobacco crusade.

ITEMS AND NOTES.

Typhus fever is epidemic in Copenhagen.

In London there are now eighty-five medical women.

The Harvard Veterinary School is to be discontinued.

Epidemics of smallpox are reported in Texas, Wisconsin, and Tennessee.

The death of Dr. L. Acconci, professor of gynecology at Genoa, is announced.

Certain medical authorities in Russia hold that the quails in that country are a source of typhoid infection.

Dr. N. Senn will give a course of lectures on military surgery at the University of Chicago, beginning next fall.

The Board of Education of Washington, D. C., has recommended that eleven medical inspectors of schools be appointed.

The Medical Society of the State of New York will hold its ninety-fifth annual session in Albany, January 29, 30, and 31, 1901.

The Woman's Hospital in the State of New York has just received a bequest of $150,000. The money will be used to build the nurses' home.

Dr. J. W. Barnes, of Detroit, a graduate of the Independent Medical College, Chicago, was fined $80 for practicing medicine without a license.

The authorities at Constantinople are making strenuous efforts to put an end to the illegal practice of medicine throughout the entire Ottoman empire.

Dr. E. H. Welch and Dr. Wm. Osler, of the Johns Hopkins Medical School, have been named as possible candidates for the presidency of the university.

The officials of the Pennsylvania railroad system have adopted a system whereby all their engineers and firemen must be examined by an oculist and aurist.

Dr. Nellie S. Shulean, of Minnesota, has been commissioned by the Presbyterian Board of Home Missions as its first woman medical missionary in Porto Rico.

Dr. A. D. Smith, of Philadelphia, has just returned to this country from his second exploring trip in Africa, during which he marched 3000 miles into the interior.

The question as to whether or not to exclude the Latin language from the Russian Military-Medical Academy at St. Petersburg has been decided in the negative.

Statistics show that there are nearly 24,000 medical students in the United States, less than half as many in the law schools, and only about one-third in the theological seminaries.

Since the recent storm at Galveston, improvements and temporary repairs to the amount of $25,000 have been made on the buildings of the medical branch of the University of Texas.

The library of the Rush Medical College, Chicago, has received from Dr. Christian Fenger a collection of books which represents the German surgical literature of the last fifty years.

Dr. Henry Wilson, of Randolph, Kansas, has been tried and found guilty for fraudulent use of the mails, in advertising blank medical certificates to any who would buy them.

The first woman to have been graduated with the degree of doctor of medicine in Hungary is Fräulein Charlotte Steinberger, who recently received her diploma from the University of Budapest.

A medical automobile society is in course of formation in Belgium. It is constituted on the cooperative principle, the purpose being to enable members to procure an automotor car at greatly reduced prices. Since the beginning of January some 1500 licenses for motor cars have been delivered by the society.

Dr. Finlay, of Havana, is reported to have declared his belief that mosquitoes are the only propagators of yellow fever, and that if Havana could be kept absolutely free from yellow fever for two or three months all the infected mosquitoes would die, and then the only way the city could again become infected would be through the importation of a fresh case from another place.

Cases of pulmonary and laryngeal tuberculosis which have reached the stage of cachexia are made notifiable by a recent decree of the Minister of the Interior in Saxony. The notification is compulsory

only if the patient moves from one place to another, or has become dangerous to those about him. Cases of the kind treated in private institutions or lodged in hotels or boarding-houses must also be reported.

THE Queen has granted unto Sir William MacCormac, Bart., president of the Royal College of Surgeons of England, authority to wear the Cross of Commander of the Legion of Honor, conferred upon him by the President of the French Republic, in recognition of services which he rendered to the French wounded during the war of 1870–71, as well as to the International Medical Congress held during the recent Paris exhibition.

ACCORDING to the *Journal of the American Medical Association*, a strike of medical men engaged in club practice is threatened in Germany. The clubs are their official institutions, membership being compulsory for working people, and they are in the habit of treating their medical employees badly and appointing them on humiliating terms. This condition has lasted a long time, and it is now proposed to organize the profession and to raise a general defense fund, and generally to give the members of the workingmen's sick-clubs a dose of the same medicine which they have so often administered through their trade-unions.

IT is announced, says the *Medical Record*, that on the night of December 31, the last of the year and the century, the American Red Cross Society will hold a number of watch meetings in New York City to see the old century out and the new one in. There will be, according to the plans of Miss Clara Barton, thousands of other such meetings all over the country, arrangements for which are being made with various State and city authorities all over the land. The Red Cross plans to have its big meeting in New York held in Madison Square Garden, where music will be furnished by a band of one hundred pieces and a chorus of one thousand voices.

Two years ago Dr. Rudolf Herzog, of Tübingen, undertook excavations in the island of Cos with the view of finding the temple of Æsculapius. At a depth of eighty centimeters (32 inches) he came upon a mosaic flooring which represented Orpheus charming the wild beasts. At a depth of two and a half meters (nearly eight feet) in the neighborhood of the church of St. Anna he found two columns, and not far from them the remains of an aqueduct and a small statue of a young man. Great importance is attached to Dr. Herzog's discovery of the supposed temple of Æsculapius. The excavations are still in progress, and it is hoped that many antiquities will be found.

According to an English newspaper, an inquest was held recently at Southminster, England, on the infant child of a laborer who had died, presumably as the result of opium poisoning, on the day after its birth. The child had screamed very much during the early hours of its life, and was given a few drops of its mother's medicine by a friendly neighbor. The medicine contained opium, and it is probable that an enormous dose had been given for so young a child. From the evidence it appeared that it was no uncommon thing for nurses and midwives in that district to administer to infants doses of the mixtures prescribed for their mothers. The jury added a rider to their verdict calling attention to the practice.

Dr. Leopold Javal, the eminent French ophthalmologist, who has, according to the *Medical Press and Circular*, just been made officer of the Legion of Honor, recently lost his sight as the result of glaucoma. He began his career as a mining engineer, but having undertaken the translation of Helmholtz's "Optical Physiology," he was so much interested that he studied medicine and took up ophthalmology as a specialty. Some years ago he was elected member of the Chamber of Deputies, and was instrumental in passing the "Seven Children Law," which exempts from taxation the parents of families of not less than that number. He now devotes his attention to the improvement of the means of enabling the blind to read and write.

Curious dust statistics were brought to light at the last meeting of the Berlin Society for the Promotion of School Hygiene. Herr Sueck, himself a teacher at one of the large municipal schools, has found that in 1110 grammes of dust swept from under the boards of screwed-down school benches there were more than two milliards of germs, and that the dust contained thirty-three per cent organic matter. That these germs are not all innocuous, that many of them may be pathogenic and favor the spread of disease, has been amply proved. Washable wall-paint or wall-papers, linoleum-covered floors, and school benches which can be turned up on pivots so as to expose the whole of the floor space for daily scrubbing, are improvements strongly advocated by the society.

Chicago has officially tendered, says the *Philadelphia Medical Journal*, the $34,000,000 drainage channel to the United States government. The memorial contains a direct tender from the sanitary district of the channel to the general government under the terms of the sanitary district law of Illinois, which contains a clause reading as follows: "When such channel shall be completed and the water turned therein, to the amount of 300,000 cubic feet of water per minute, the same is hereby declared a navigable stream, and when-

ever the general government shall improve the Desplaines and Illinois rivers for navigation, to connect with this channel, said general government shall have full control over the same for navigation purposes, but not to interfere with its control for sanitary or drainage purposes."

THE following plan, says the *Medical Record*, for disinfecting the mails from the leper settlement at Molokai has been instituted by Dr. Carmichael, of the Marine Hospital Service at Honolulu. All mail from the leper settlement will be disinfected with sulphur dioxide at the settlement, and then transferred directly to the steamship and received aboard in clean and disinfected sacks furnished by the post-office authorities. At Honolulu the mail will be taken in the sacks directly to a room in the post-office used for disinfection purposes and disinfected with formaldehyde without removal from the sacks. All letters are perforated or the corners clipped at the settlement before disinfection. No case of leprosy, the surgeon reports, has yet been discovered among the post-office employees, although non-disinfected mail from the leper settlement has been handled by them for many years.

IN all the book-shop windows of Vienna, writes a correspondent of the *Philadelphia Medical Journal*, is to be seen Professor Schenck's little brochure, "Aus meinem Universitätsleben," wherein he seeks to clear himself before the world of the charges by means of which his enemies ousted him from his position at Vienna. In the sixty-nine pages he outlines the story of his thirty-three years of work in his laboratory at Vienna; how he had to live on a wretched pittance that did not permit him to appear in society even, to say nothing of tasting the other joys of life; how his work in biology had found recognition throughout the world; and how, since the year 1864, he had used every opportunity to investigate the laws governing the influencing of sex. He shows, further, that the newspaper announcement of his theory did not come from him, and was, besides, incorrect. Then he charges the University Court at Vienna of unfairness, in that they refused to hear his witnesses, and in the second case gave him no announcement that his case was on, and thus prevented him from putting in an answer. He shows how trumpery the charges against him were — being of actions of which at least half a dozen of the other members of the faculty were guilty. The cause of it all he lays at the feet of one or two colleagues, who, out of hatred and envy and jealousy at his earnest labors and successes, intrigued until they obtained the ear of the royal ministry, and, *voilà*, he was out. He promises to bring out a larger and more complete discussion of his theory in the near future.

NEW PUBLICATIONS.

MANUAL OF OTOLOGY.

The appearance of this second edition of Dr. Bacon's manual in less than two years from the publication of the first is sufficient proof of its value and appreciation. It has been increased by about twenty-five pages, a number of new figures, and replacement of old ones by new. The introductory chapter from the pen of Dr. Blake should be carefully read and his suggestions followed out by all those who purpose doing thorough, honest work in otology.

Among the new illustrations can be seen a plate containing nine colored figures of the drumhead in health and disease, and another showing the pneumatic cells and tympanic cavity.

As a college text-book this manual can be recommended to the student as a short and practical treatise upon otology.

Manual of Otology. By Gorham Bacon, A.B., M.D., Professor of Otology, Cornell University Medical College, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an Introductory Chapter by Clarence J. Blake, M.D., Professor of Otology in Howard University. Second Edition, Revised and Enlarged. With 114 Illustrations and 3 Plates. Small 8vo; 422 pages. Price, $2.25. New York and Philadelphia: Lea Bros. & Co., 1900.

HEART DISEASE IN CHILDHOOD.

This little work is written in a delightful and clinical spirit. The author has arrived at some conclusions in regard to heart disease in children, tending to modify the grave prognosis so often accorded them. The work is exceedingly practical in spirit, and is one which will be read with as much interest as edification.

Heart Disease in Childhood and Youth. By Charles W. Chapman, M.D. Durh., M.R.C.P. Lond., Physician to the National Hospital for Diseases of the Heart, Soho Square, W.; Late Physician to the Farringdon Dispensary, E. C. With an Introduction by Sir Samuel Wilks, Bart., M.D., F.R.S., Physician Extraordinary to H. M. the Queen; ex-President of the Royal College of Physicians, and Consulting Physician to Guy's Hospital. London: The Medical Publishing Company, Limited, *Clinical Journal* Office, 22½ Bartholomew Close, E. C.

DISEASES OF WOMEN.

In the brief space of two years is demanded a third edition of this admirable text-book of the diseases of women. The author is a writer of clear and vigorous English, and his descriptions contain the pith and essence of all that it is desirable to impart. The work is copiously illustrated by plates and engravings of a high order. All the most approved methods of gynesic surgery are placed before the reader as they should be, and for the purposes of either student or practitioner the work will be found all that can be desired.

A Text-book of the Diseases of Women. By Henry J. Garrigues, A.M., M.D., Gynecologist to St. Mark's Hospital in New York City, etc. With 367 Illustrations. Third Edition, Thoroughly Revised. Philadelphia: W. B. Saunders & Co., 1900.

THE MEDICAL NEWS VISITING LIST.

The time for visiting lists is at hand, and among old favorites will be found this one, which is in nowise less attractive than formerly. It continues to be a useful compendium of essential and desirable matter for a physician to carry with him in his daily round. The usual number of useful tables are inserted in the book.

The Medical News Visiting List, 1901. Thirty Patients per Week. Philadelphia and New York: Lea Brothers & Co., 1900.

THE PROGRESS OF MEDICAL SCIENCE.

SURGERY.

Iliac Colostomy Made by the Double Ligature.

Gangolphe (*Revue de Chirurgie*, No. 2, 1900) offers the following plan for performing this operation. He first makes a small incision to prevent the escape of intestinal coils which are not wanted, and then seizes a portion of the sigmoid flexure where the mesentery is largest, in this manner facilitating intestinal resection and anastomosis when the artificial anus is no longer desired. A double ligature is passed through the mesentery at a point three or four centimeters from the gut. The threads are crossed and each tied as tightly as possible, thus including between them a section of the intestine five to six centimeters in length. The constricted portion is elevated a short distance above the skin, and the visceral portion united to the parietal layer by suture. From forty-eight to seventy-two hours later the constricted mass is opened widely with the thermocautery and the ligature is cut. The author has had no serious symptoms where this procedure has been followed. Gangolphe has had nearly twenty such cases, and none of his patients vomited before the ligatures were divided. There were no local complications in any case, and the permanent results were all that could be desired, there being two good openings at the level of the skin, and well separated.

Surgical Treatment of Perityphlitis.

Rosenberger (*Berl. Klin. Woch.*, Oct. 8, 1900) advises, in very acute cases of perityphlitis, operation during the attack, but recommends to stop at simple incision and drainage without attempting to remove the appendix. Pus cases are thus assured of efficient drainage, while in those which are not yet purulent early evacuation is facilitated. The excision should extend from three to six centimeters, and reach down upon the peritoneal wall, after which the cavity should be opened with the finger. The edges of the wound are then sutured around the drain. Rosenberger advises secondary removal of the appendix at a subsequent relapse. Out of fifteen cases thus treated, twelve had no relapse to date. In eleven patients pus was found; four showed no suppuration at the time, but two of these later presented fecaloid pus.

The operation as recommended by Rosenberger, if performed at the proper time, seems adequate in all — even in desperate — cases,

while operative interference of any kind will fail of success if undertaken too late. Rosenberger emphasizes especially the fact that the operation is easy of performance and can be made by the family physician at the patient's house.

Abdominal Hysterectomy for Cancer.

Konig (*Centralbl. f. Gynäk.*, No. 43, 1900) finds that the more favorable the immediate results of vaginal hysterectomy the less satisfactory were the after-histories. He preferred abdominal hysterectomy after Freund's method, which he had practiced in seven cases, with three deaths. This high mortality was due to the fact that all cases were too advanced to allow of the vaginal operation. Peiser's practice was adopted—that is to say, the pelvic cellular tissue was carefully cleared, before the removal of the uterus, of glands, lymphatic vessels in connection with the genitals, and plain muscle fibers. The operation lasted from two and a half to three hours, but very little blood was lost. Preventive ligature of the hypogastric artery is unnecessary and useless, as the collateral circulation is too freely established. As much as possible of the pelvic peritoneum should be saved. Thorough isolation of the ureters is of high importance, and can be done without catheterism of those ducts. On the morning of the operation the cancerous tissue is thoroughly scraped out and cauterized, and just before the abdomen is opened the cavity made by the scraping is once more cauterized and the vagina thoroughly disinfected.

MEDICINE.

Fetal and Infantile Typhoid.

The serum action occurs, says J. L. Morse (*Archives of Pediatrics*, December, 1900), in infantile as well as in adult typhoid. There are no data as to whether or not it occurs in fetal typhoid.

The agglutinating power may or may not be present in the blood of infants born of women with typhoid. If present, it is transmitted from the mother to the child through the placenta. It is possible, however, that it may be formed in the child in response to toxins transmitted through the placenta. The agglutinating principle can pass through the normal placenta; part of it, however, is arrested in the passage. Whether or not it is transmitted seems to depend on the strength of the agglutinating power in the maternal blood and the length of time during which the placenta is exposed to it.

It may be transmitted to the nursling through the milk. It may

appear in the infant's blood in less than twenty-four hours. It lasts but a few days after the cessation of nursing. It is always weaker in the milk than in the maternal blood, and always weaker in the infant's blood than in the milk. This weakening of the agglutinating power is due to the obstruction to its passage in the mammary gland and in the nursling's digestive tract. The chief factor governing transmission is the intensity of the power in the maternal blood. A subordinate but important factor is some unknown condition in the digestive tract. If the power in the maternal blood is weak and the obstacles great, it may not be transmitted.

Stomach Condition in Early Tuberculosis.

In early tuberculosis, says Boardman Reed (*Philadelphia Medical Journal*, Dec. 1, 1900), the secretion of HCl in the stomach is very frequently excessive, the peptic glands being in a condition of irritability which causes stimulant remedies of the creosote class to disagree and act injuriously.

Oils tend to depress the secretory function of the stomach, and in consequence cod-liver oil is likely to help the cases which the creosote class of drugs hurt; but, on the other hand, hurts the cases in which the gastric secretion is inactive, the very ones in which creosote and the like often do good.

Therefore it ought to be the rule to ascertain the condition of the secretory function of the stomach before pushing either class of remedies.

When analysis of the gastric contents cannot be made, it is safer to combine creosote with cod-liver oil, so as to let one neutralize the other in their influence upon the stomach.

The motor function is very generally depressed in tuberculosis, and must be restored before a cure can be brought about. Drugs avail little in this direction, but diet, exercise, especially in the open air, faradism, and abdominal massage—except when hyperchlorhydria complicates—are all valuable means of effecting the result.

The Action of Distillate of Tea and Coffee on the Respiration and Heart.

The following conclusions have been reached by Binz (*Cent. für Inn. Med.*, Nov. 24, 1900) after extended observations on the action of distillate of tea and coffee on the heart and respiration: (1) Distillates of the roasted coffee free from caffeine increase the breathing in man. (2) This is especially noticeable if the individual has taken no

nourishment for several hours before. (3) The action is not of long duration. (4) The action is that of an increase in frequency of the respiratory acts, and not in the volume of each. (5) In dogs that have been paralyzed by alcohol, its administration improves the breathing. (6) Muscular unrest and slight psychic excitement also follows. (7) The frequency of the pulse of a normal person is not affected. (8) The distillate of a good Chinese tea increases this only slightly. (9) Large quantities of coffee do not produce any physiologic effect upon the brain or muscles.

THERAPEUTICS.

Treatment of Acute Alcoholism.

J. K. Bauduy (*St. Louis Medical Review*, Dec. 1, 1900) says that acute alcoholism is a self-limiting affection, and results, not from sudden withdrawal, but from excess and abuse of alcoholic "so-called stimulants," better called sedatives and narcotics in the doses in which they are taken. The expectant plan of treatment is the most rational. Opiates are dangerous because they additionally derange digestion, and, acting as powerful cardiac sedatives, tend to paralyze the heart; and finally, because they check elimination and interfere with the normal secretions and digestion. Sleep is never to be attained at risk or hazard to the patient, but is to be expected as one of the harbingers of a convalescence not to be enforced. In acute alcoholism, as in many other acute diseases, the *vis medicatrix* is fully adequate in most cases to produce the happiest results.

Paraform Collodion in the Treatment of Cutaneous Saprophytes.

Unna (*Monatsch. f. Prakt. Dermat.*, 1900, vol. xxxi, No. 1) recommends the use of the following mixture in the treatment of erythrasma, pityriasis versicolor, and pityriasis rosea: Paraform, ʒ ss, in very fine powder; triturate with spirit of ether f ʒ ss, and add ricinated collodion f ℥ ss. Diseased surfaces the size of the hand are painted for two or three days with this mixture, after which they are allowed to desquamate with the help of vaselin inunctions. In this manner the whole body may be cleaned of the saprophytic vegetation inside of two weeks.

As a subsequent application, which is at once safe and convenient, Unna recommends daily washing with Th. Douglas's superfatted formalin soap.

Fatal Case of Iodoform Poisoning.

Anschutz reports a case occurring in v. Mikulicz's clinic, in which the patient died with symptoms of acute iodism. He had already received on two former occasions injections of eighty and ninety grammes of a ten-per-cent solution of iodoform in glycerin into an abscess cavity, when several days after a last injection—this time of 100 grammes (same solution)—he showed symptoms of intoxication characterized by general apathy, drowsiness, pustulous eruption about the nose, etc. Anschutz ascribes the fatal termination of this case by poisoning to a cachectic condition superinduced by total caseous degeneration of the suprarenal bodies, and warns against the uncautious exhibition of iodoform-glycerin in larger dosage.

Physostigmine versus Curare.

Pal (*Centr. f. Phys.*, 1900, No. 10; in *Berl. Klin. Woch.*, Oct. 15, 1900) has made the accidental discovery that curarized animals which have subsequently received physostigmine spontaneously resume their breathing. A repetition of the experiment secured identical results: at first muscular contractions and sialorrhea, then irregular, and finally regular, spontaneous respiration. Consequently physostigmine seems to be an antidote to curare.

RHINOLOGY AND LARYNGOLOGY.

UNDER THE DIRECTION OF WADSWORTH WARREN, M.D.

Nasal Synechia.

Dr. Lederman (*Laryngoscope*, vol. ix, No. 5) conveniently divides nasal adhesions into two classes: (1) congenital; (2) acquired. The latter class he subdivides into (*a*) those of a catarrhal nature; (*b*) those due to traumatism (mechanical or chemical); (*c*) those resulting from diseases of an infectious nature (diphtheria, scarlet fever, syphilis, and lupus). Recalling the observations of Semeleder, who found the nasal septum in the median line but ten times in forty-nine skulls, it would seem reasonable that congenital atresic formations should be observed frequently. The clinical evidence, however, does not support that idea. Watson, Williams, Downie, Myles, and Zuckerkandl have reported membranous occlusions unilateral in character, but these authors regard them as rare occurrences. Zuckerkandl believes the condition generally due to some form of traumatism, more often after the application of the galvanocautery. In the acquired form, catarrhal disturbances of the mucous membrane probably account for

certain cases. Where there is a tendency to repeated engorgement of the turbinated bodies, one can readily picture the agglutination of the impinging surface and the possible formation of a connecting band. Such a bridge might exist without causing much annoyance to the individual, so long as compensation continues in the patent side.

The class of cases most frequently seen are those forms of atresia which follow the application of instrumental or caustic agents. In these patients a chronic inflammatory condition is usually associated with the obstructing factor. The author recommends following the suggestion of Gleitsmann, who rubs trichloracetic acid into the wound after the use of the galvanocautery. Excessive reaction is retarded by the resulting eschar, and the wound heals under a soft grayish scab which comes away in about five to seven days. In operations upon the septum it is always advisable to introduce some form of separator to prevent the turbinated bodies reaching the septal wound and becoming agglutinated. A surgical sponge or spunk is recommended. It can be cut into any shape, and after being covered with some antiseptic powder, should be introduced over the wound, and may be permitted to remain for forty-eight hours. Moisture increases its volume, and when in position it exerts direct pressure upon the bleeding surface and prevents contact of the opposing tissues.

OPHTHALMOLOGY AND OTOLOGY.

UNDER THE DIRECTION OF R. W. GILLMAN, M.D.,
Clinical Professor of Ophthalmology and Otology, Detroit College of Medicine.

Immature Cataract and its Treatment.

Dr. G. E. de Schweinitz (*Journal of the American Medical Association*, Dec. 8, 1900) brings this most interesting paper to a close with the following conclusions:

1. Certain lenticular opacities, most often situated in the naso-inferior quadrant of the lens, occasionally are practically stationary and may be designated "non-progressive." They do not handicap the patient's ocular abilities, and may with propriety be separated from the class to which the name incipient cataract is ordinarily given.

2. Certain lenticular opacities undoubtedly depend, as Risley and others have shown, on what may be designated "disturbances of the choroid" as apart from active and actual choroiditis; and their progress is sometimes apparently checked by measures—optical, local, and general medicinal—which restore the choroid coat to normality.

Such measures do not, however, remove from the lens the opacities which have already formed when the patient comes under treatment.

3. Certain lenticular opacities which appear in association with diabetes mellitus, nephritis, lithemia, and arteriosclerosis, particularly the last two diseases, are sometimes apparently retarded, like those in No. 2, by measures which are suited to the patient's general condition in connection with local and optical therapeutics; but these measures never dissipate the lens-lesions already present.

4. Certain lenticular opacities produce not only prodromal myopia, but a very high degree of astigmatism, the correction of which may result temporarily in a surprising improvement in visual acuity.

5. Certain lenticular opacities cause an obscuration of vision that may be largely dissipated temporarily by providing the patient with glasses moderately tinted which give the best visual acuity during mydriasis, and maintaining this mydriasis with a mild mydriatic. Sometimes, under these circumstances, the mydriasis seems to hasten maturation; this fact should be explained to the patient.

6. Certain lenticular opacities, especially in the form of striæ of refraction, cause an obscuration of vision which is somewhat relieved by maintaining a mild myosis with weak solutions of one of the myotics.

7. If the vision of eyes suffering from incipient cataract of the nuclear type is improved by mydriasis, this is not a sufficient indication for optical iridectomy, unless the patient finds by observation that the increased visual acuity, as noted by test-type examination, is also advantageous in pursuing his ordinary occupation.

8. The extraction of unripe cataracts is preferable to any of the ordinary operations for ripening cataract.

9. There is no evidence that electricity has the slightest influence in checking the rate of progress of incipient cataracts, or in dissipating the opacities which have formed.

10. If there is any evidence that massage of the eyeball favorably modifies the rate of development of cataract it is still very insufficient; there is some evidence to show that massage sometimes hastens the opacification of the lens. The subject demands further investigation.

11. There are no "specific remedies" for the treatment of cataract, and there is no reliable evidence that drugs exist which cause the absorption of partially or fully formed cataracts.

12. All lenticular opacities, unless perhaps those which belong to the so-called non-progressive group, should be regarded as indications for a thorough investigation of the patient from the general as well as the ocular standpoint, and for an employment of remedial agents—optical, local, medicinal—according to the findings.

DERMATOLOGY.

UNDER THE DIRECTION OF ANDREW P. BIDDLE, M.D.,
Lecturer on Dermatology, Detroit College of Medicine.

Dermatitis Vesico-bullosa et Gangrenosa Mutilans.

In the *Journal of Cutaneous and Genito-Urinary Diseases* for December, 1900, Dr. Grover W. Wende, clinical professor of dermatology, University of Buffalo, records an interesting case under the above title, from which the following is extracted: A healthy looking girl aged seventeen years, of nervous, sanguine temperament, reared in the country. Father, farmer, died from cardiac disease, aged thirty-six. Mother, forty-one years old, in excellent health. No sisters; one brother, nineteen years old, well developed. All her relatives healthy and vigorous. Measles and whooping-cough constituted her only infantile diseases. Her menstruation was established at the age of thirteen, accompanied by severe headaches which diminished in frequency as she advanced in years, but still continues. Prior to this peculiar manifestation of the skin weight was 140 pounds, and her physical condition was perfect. In May, 1899, she applied pure carbolic acid to a wart situated on the back of the right hand. On the following morning the wart was surrounded by a red, inflamed zone, associated with a burning sensation and considerable pain. This erubescence gradually extended until the entire dorsal surface was involved; then, after having persisted for three days, it slowly disappeared. Immediately succeeding this process, which was apparently caused by the application of the acid, there became visible upon the flexor surface of the forearm a well-defined red area, two inches or more in diameter, and studded with small blisters. Three similar patches coexisted, two in close proximity to the elbow-joint and one upon the face. At the end of a week these manifestations simultaneously faded, leaving only pigmented skin; then there was suddenly perceptible a group of vesicles over the second joint of the little finger, which rapidly changed into a superficial gangrenous process, accompanied by darting, throbbing pains. The gangrene rapidly spread until the entire digit was tainted; and, at the expiration of a month, the process of mortification was complete and amputation became necessary. After the lapse of another week it was observed that the adjacent phalanx had become involved, upon its flexor surface, in two distinct localities. The process was so acute and the destruction of tissues so rapid that after the lapse of a single week the patient was again compelled to submit to the knife. Subsequent to each operation the flaps united by first intention.

The patient gradually improved until September, 1899, when she experienced a peculiar subjective sensation, characterized by jerks and stings extending from shoulder to wrist. The arm was more or less swollen. The suffering was keen, but its acuteness was suddenly modified by the reappearance of the disease in those parts of the arm previously affected, consisting principally of numerous small gangrenous lesions seated about the hair follicles—a rule which, according to observation of the author, prevails in the inceptive stage of each gangrenous lesion. Many of these lesions possessed a depressed center, or rapidly coalesced, forming large, parchment-like plaques, which after several days began to slough and were cast off. During the outbreak there existed a well-marked anesthesia in and about the parts affected. There was also a general and more or less uniform tumefaction of the entire arm, the difference in circumference when compared with the well member being about one inch in excess. From this the picture began to change in character: the vesicles, bullæ, and small necrotic spots gradually healed and grew less in number; the dermatitis subsided; the large, parchment-like films disintegrated, sloughed, and forsook their mooring, leaving behind them the aspect of a granulating ulceration. On November 26 the patient suddenly experienced severe and darting pains which penetrated the right shoulder, and which, after a duration of twenty-four hours, were superseded by lancinating pangs in the upper part of the chest, where, almost instantly, appeared an opalescent plaque about the size of a fifty-cent piece. A few days later similar plaques were discovered lying outside of but in close proximity to the outline of the one just described. These finally merged into one, forming an irregular field eight inches long and four inches wide.

On the 25th of January, 1900, the patient was suddenly seized with a violent headache, chilliness, and ringing in the ears, attended by a brief loss of consciousness. The same symptoms recurred daily until February 1, when she suffered from an unusually severe attack, accompanied by terrible shooting pains along the spine and down the injured arm. In addition there was, in the upper portion of the back, a burning sensation of the skin which suddenly culminated in the formation of another characteristic lesion as large as a twenty-five-cent piece. This was surrounded by an anesthetic area, and at the end of thirty-six hours took on the changed color. Two more lesions soon formed in the immediate neighborhood; these eventually combined with the first, resulting in an oblong patch fully six inches in length, which became subject to the same characteristic alterations that appeared in the lesion located upon the chest. The peculiar attacks already indicated became more and more frequent, the patient

having experienced as many as six in a single day. With each outbreak the subjective symptoms were, in an insidious manner, enhanced in quality as the disease progressed from the finger to the back.

GYNECOLOGY AND OBSTETRICS.

UNDER THE DIRECTION OF W. P. MANTON, M.D.,

Adjunct Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine.

What is Normal Menstruation?

In brief, says G. J. Englemann (*New York Medical Journal*, Dec. 8, 1900), the menstrual period is characterized by an intensification of all vital energies, followed by a depression that appears with the coming of the flow, and this latter is the phase ordinarily termed "menstruation." Under ideal conditions and in perfect health, the physiological status is such that this epoch, preceded by a day or two of heightened activity, is marked by a moderate lassitude, mental and physical, the flow persisting for from four to five days and recurring at regular intervals of about twenty-eight days. It is a period of heightened susceptibility, and is so sensitive a barometer as to quickly record any variation from the normal; excitement, exertion or fatigue, mental or physical, are promptly indicated by variation in this function, and in our every-day life such disturbing elements constantly occur, so that conditions actually existing vary greatly from this ideal.

The average period, of the American girl in average health, presents very different features: Regularity in fifty per cent only; recurrence every twenty-eight days in thirty per cent, varying most frequently from twenty-six to forty-two days, and being in forty-five per cent over twenty-eight; duration varies from two to seven days, averaging 4.6 days; from sixty-six to seventy per cent suffer more or less, the number of sufferers varying, according to age and intensity of occupation, between thirty and ninety per cent. Lessened ability for exertion, mental or physical, is admitted by sixty per cent; some few are habitually incapacitated from work, and thirty per cent occasionally.

The functional condition of the girl in good health, under modern conditions of life, is by no means the ideal one, and, in fact, the functional health of the American girl, the coming mother of American men, is far from what it should be by right of inheritance and surroundings. This fact we must recognize, we must face; upon physicians and educators devolves the duty of the study and correction of the evil.

NEUROLOGY.

UNDER THE DIRECTION OF CHARLES W. HITCHCOCK, M.D., DETROIT, MICH.,
Attending Neurologist to Harper Hospital.

Malaria with Symptoms of Disseminated Sclerosis.

For years it has been known that the nervous system is involved in malarial cases, but comparatively few careful and conclusive studies of tissues and vessels implicated have been made. In the *American Journal of the Medical Sciences* for December, 1900, Wm. G. Spiller reports a case which presented well-marked symptoms of disseminated sclerosis, and in whose capillaries of the central nervous system large numbers of malarial parasites were conclusively demonstrated.

The three forms of malaria with symptoms of disseminated sclerosis distinguished by Torti and Angelini (quoted by Spiller) are: (1) Cases in which the symptoms of multiple sclerosis are transitory and present only during an attack of malarial fever; (2) cases in which the symptoms of multiple sclerosis appear after the fever and are of varied duration; (3) cases in which the symptoms of multiple sclerosis appear suddenly without any fever. The last must, therefore, be a larvated form of malaria.

The symptoms of disseminated sclerosis shown in this case were the following:

1. A very marked intention tremor of left hand.
2. Marked ataxia of left leg.
3. Transitory hemiparesis, first of one side of the body, then of the other.
4. Headache, vertigo, drowsiness, and diplopia.
5. Marked vertical nystagmus, readily elicited.
6. Speech that was distinctly scanning.
7. Tendon reflexes exaggerated on the right side, with ankle clonus on the same side.

This seems to be the first case of the kind reported with autopsy. It is interesting to note that the malarial parasite may be absent from the peripheral circulation and yet found in large numbers in the capillaries of the central nervous system. It is of further interest to note that such cases are generally due to the parasite of the estivo-autumnal type, and that this observation was here confirmed by several observers.

The case shows that the symptoms of disseminated sclerosis may result from irritation, vascular lesions, or imperfect nutrition, or

poisoning of the nerve cells, without the formation of foci of multiple sclerosis. The symptoms are largely those of ataxia, and it would seem that these may be produced either by the production of abnormal impulses from irritation or by the partial arrest in true multiple sclerotic areas of normally produced impulses.

The Cortical Localization of Sight and Hearing.

Dr. Clarence A. Good, until recently an assistant physician to the Northern Michigan Asylum, reviews our knowledge of this subject and the contributions of recent literature thereto in the *American Journal of the Medical Sciences* for December, 1900, and reports his studies of a most interesting case. He recites that the optic nerve is not a peripheral nerve; that the retina is a brain outgrowth; that the cells of its inner nuclear layer are visual sensory cells, whose axones end around cells in the inner molecular layer; that the axones of these latter cells go to form the optic nerve, some of whose fibers cross and some do not. Thence their course is somewhat devious to the occipital lobar angular gyrus.

"The cell bodies of the peripheral auditory neurons are situated in the ganglion spirale, their dendrites being distributed to Corti's organ, their axones passing through the cochlear opening of the acoustic nerve to end around cells in the ventral and dorsal cochlear nuclei in the medulla." Fibers from the cells of these nuclei pass, some to terminate in the superior olivary nucleus, the corpus trapezoideum, and the inferior corpora quadrigemina, and others to the internal geniculate body.

The case reported was untidy in habits, noisy, practically blind and deaf, and for some months the subject of convulsive seizures peculiar in character. Patient finally died of exhaustion. Examination of left hemisphere showed extensive destruction of the tissues of the occipital lobe, while a practically similar state of affairs existed on the right side also, both posterior cerebral arteries being plugged. Very careful macroscopical and microscopical studies were made of the diseased areas, and from these studies, considered in the light of the clinical evidence here shown and the literature of the subject, the following conclusions are arrived at:

1. Destruction of the cortical visual areas will lead to a degeneration of the cells in the geniculate ganglia and the corpora quadrigemina, and to a degeneration of the nerve fibers of the optic nerves and tracts.

2. The macula lutea of one eye is in connection with the opposite angular gyrus.